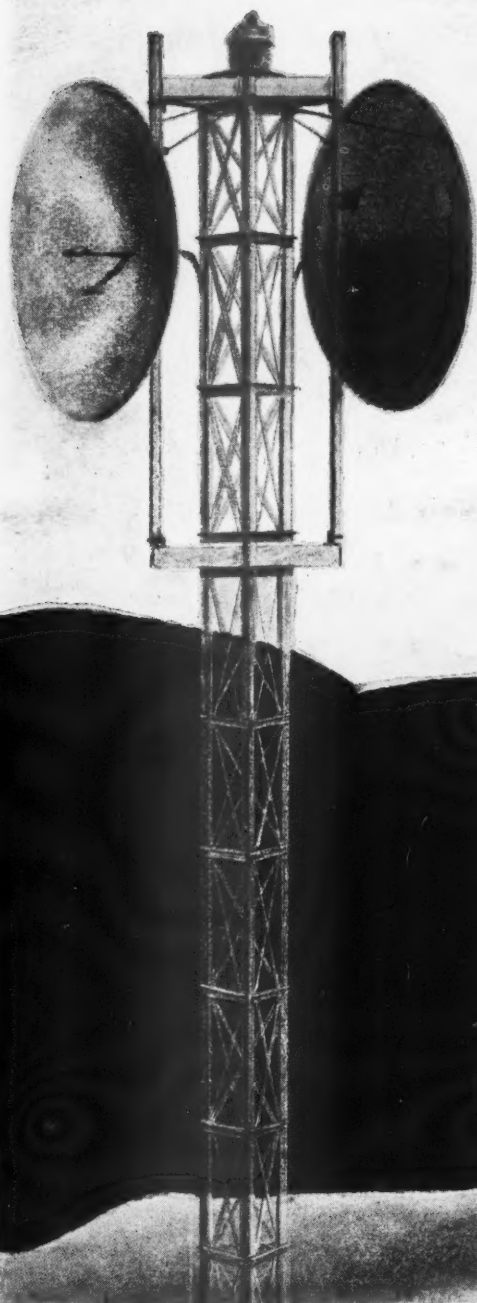


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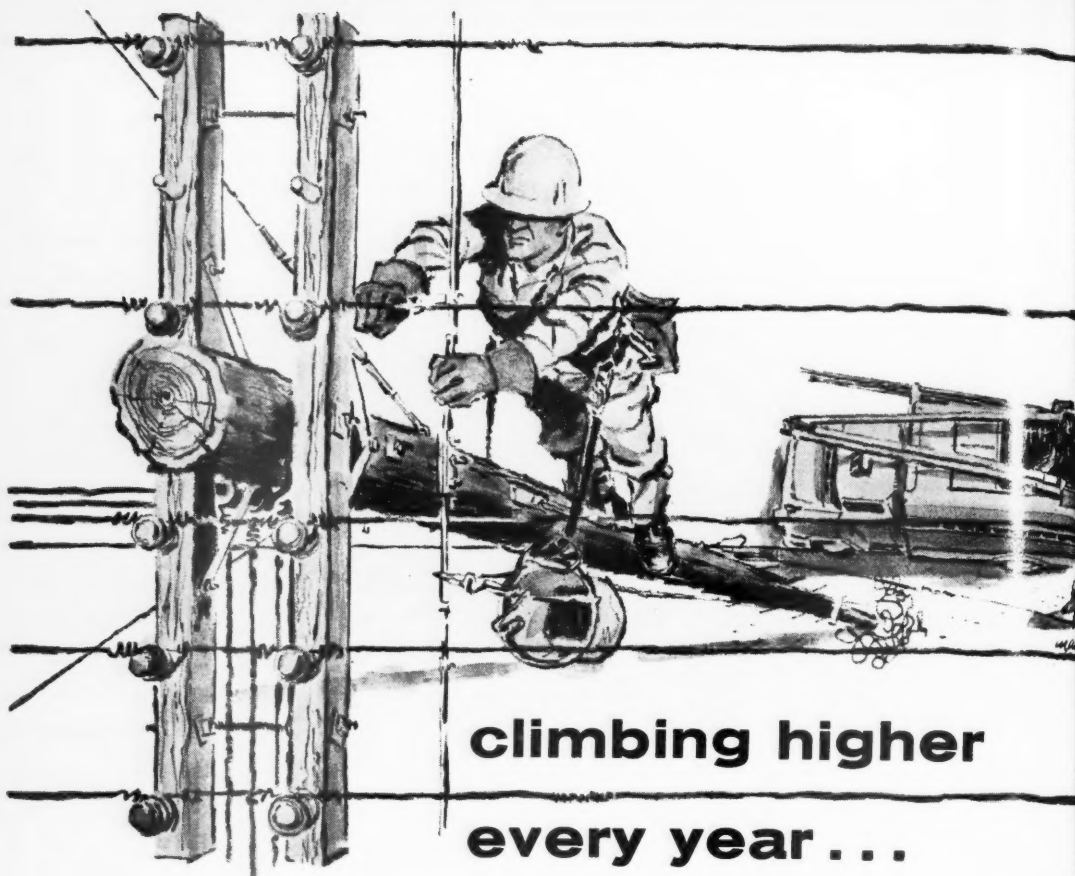
FORTNIGHTLY



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ALUTING THE 64th USITA ANNUAL CONVENTION, OCTOBER 8-11, CHICAGO

OCTOBER 12, 1961



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Public Utilities

FORTNIGHTLY

VOLUME 68

OCTOBER 12, 1961

NUMBER 8

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Subscriptions: Address correspondence to PUBLIC UTILITIES FORTNIGHTLY, circulation department, 332 Pennsylvania Building, Washington 4, D. C. Allow one month for change of address.

Entered as second-class matter April 29, 1915, under the Act of March 3, 1879, at the Post Office at Baltimore, Md., December 31, 1936. Copyrighted, 1961, by Public Utilities Reports, Inc. Printed in U. S. A.

Single copies \$1.00. Annual subscription price (26 issues a year): United States and possessions, \$15.00; Pan American countries, \$15.00; Canada, \$16.00; all other countries, \$17.50.



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America's Greatest Relatively Undeveloped Resource *Kenneth L. Dally* 580

A description of the program for training personnel at the managerial officer level.

The Government's Largest Enterprise—the Post Office *John D. Garwood* 587

The author ventures some corrective suggestions for the mounting deficits and deteriorating service standards in the Post Office.

Florida Goes 100 Per Cent Dial *Hon. Wilbur C. King* 594

Some thoughts in connection with 100 per cent dial conversion in Florida.

For 1976, a Pageant of the Telephone Woman *James H. Collins* 599

A review of the pageant of telephone operators whose legion totals more than 22 million in the Bell system alone.

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PUBLIC UTILITIES REPORTS, INC., PUBLISHERS

Executive, Editorial &

Advertising Offices 332 PENNSYLVANIA BLDG., WASHINGTON 4, D. C.

Publication Office CANDLEE BUILDING, BALTIMORE 2, MD.

Advertising Representatives:

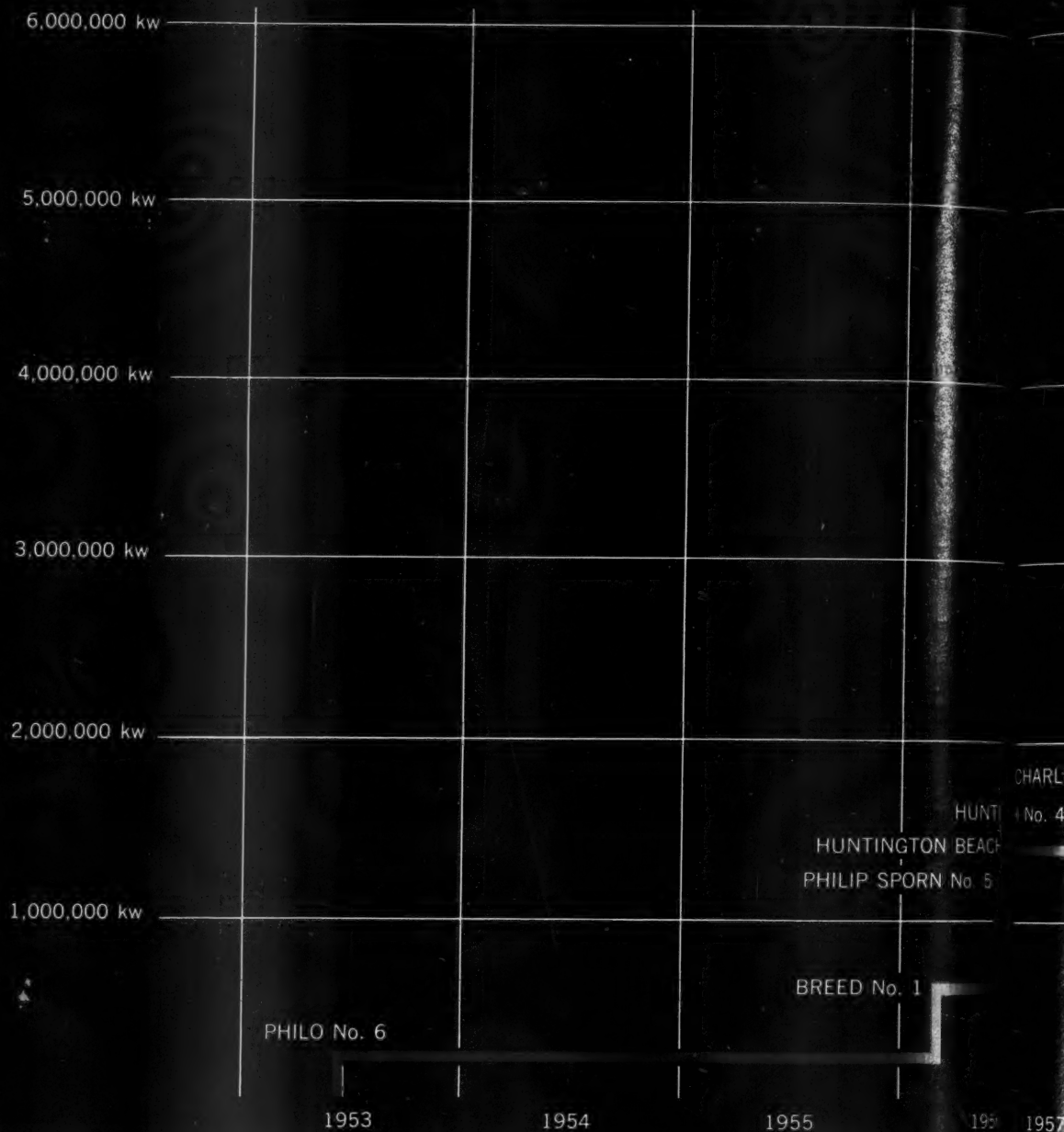
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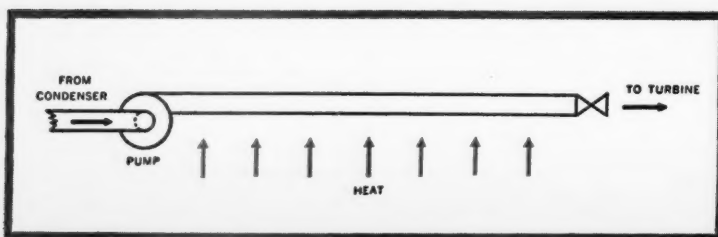
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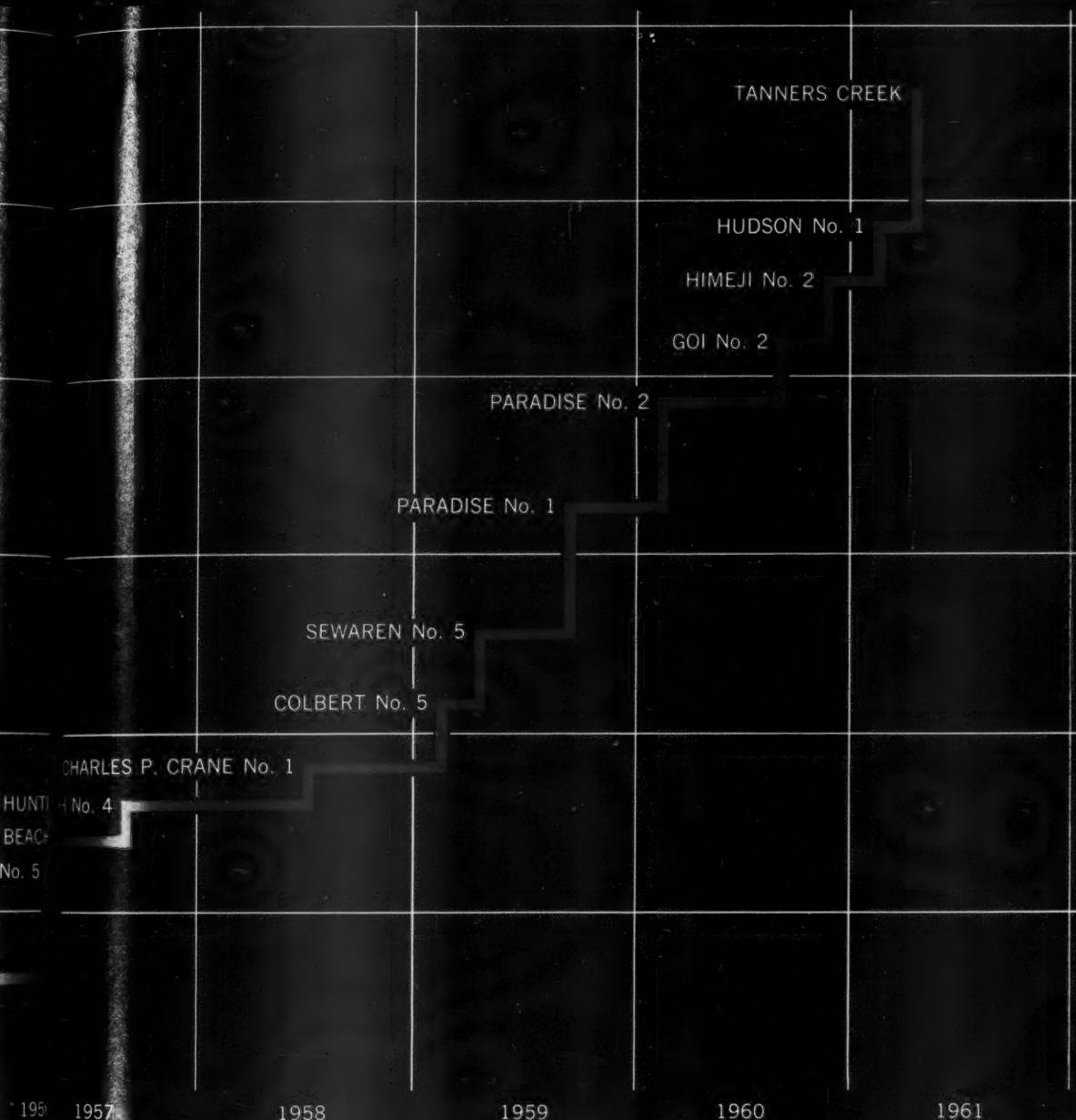


The Universal Pressure steam generator is a true once-through boiler. In effect, a long tube. Water enters at one end, picks

up heat, changes to steam, becomes superheated and leaves the other end at the desired temperature and pressure.

Fourteen Universal Pressure steam generators are now installed in order from Babcock & Wilcox. They will operate at turbine throttle pressures of 3500 psi and higher. These 14 plants represent a quarter of a billion dollar investment by the utility industry.

What is behind the trend toward Universal Pressure boiler? There are four major reasons.



Steps growing. Orders now top 5,500,000 kw.

Increased availability. The Universal Pressure steam generator true once-through unit. Its inherent simplicity has resulted in 95 percent boiler availabilities.

Increased economy. Ability to maintain steam temperatures over entire load range improves the unit's overall efficiency. B&W's flexible by-pass system permits startups with minimum fuel and economical low-load operation.

3. Lower maintenance costs. After trip-out, the Universal Pressure steam generator can be entered for maintenance in 2½ to 3 hours. Fast cold starts and hot restarts can be made without thermal shock to turbine parts or steam piping. The condensate polishing system provides maximum protection against boiler or turbine deposits. Gas conditioning minimizes superheater creep, corrosion, and lagging.

4. Reduced overall plant capital costs. A Universal Pressure steam generator weighs approximately 20% less than a drum boiler. Foundations can be smaller and less expensive. Less steel is required. Erection is simpler and faster.

For more information write to: The Babcock & Wilcox Company, Boiler Division, Barberton, Ohio.

Babcock & Wilcox

Pages with the Editors

BEGINNING October 8th to 11th, the sixty-fourth convention of the United States Independent Telephone Association meets in Chicago, which is about the time this issue is distributed. Once more we have endeavored to obtain for this convention number feature articles and materials of special interest to our telephone industry readers, in addition to our other subscribers in the general utility and regulatory fields.

We take this occasion to congratulate the independent telephone men and their associates in the Bell system on the numerous achievements in the area of public communications service. Progress along these lines borders on the fantastic when one considers such proposals as the program now being weighed by the Federal Communications Commission and the National Aeronautics and Space Administration for launching space communications satellites.

We also have the opportunity this year of repeating an editorial feature which has become increasingly popular. That is the collection of statements from telephone company executives and other officials to be found in the Industrial Progress section (page 27) under the title



FRANK G. LAPRADE

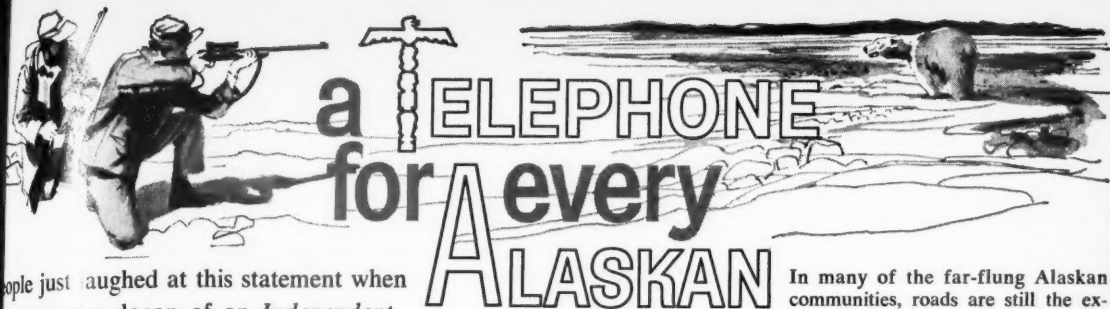


KENNETH L. DALLY

"The Telephone Industry Goes to Market." Through these columns our telephone industry readers have an opportunity of registering their views, not only about company operations and plans, but also overall problems and developments as they affect the telephone industry.

THE opening article in this issue comes to us from FRANK G. LAPRADE, first vice president of the USITA, who will—if the usual custom is followed—probably be elected president of the USITA at the sixty-fourth annual convention of that group. Born in Rocky Mount, Virginia, and educated at the public schools there, with special courses in accounting, Mr. LAPRADE entered the telephone business in 1929. He joined the Lee Telephone Company, now based at Martinsville, Virginia, and through successive promotions rose to the post of president in 1955.

In his industrial activity, he has also been president of the independent telephone associations of both Virginia and North Carolina, and a member of the board of directors (since 1955) and executive committee (since 1956) of the USITA. Mr. LAPRADE's article discusses the ways and means by which the national association helps the independent



people just laughed at this statement when it became the slogan of an Independent telephone company. But in the fabulous 49th State, success stories are unfolding that make Horatio Alger tales seem pale by comparison. And the story of the independent telephone companies is among them.

The indomitable American pioneering spirit is very much alive in Alaska today. All over Alaska, thousands of homesteaders are now developing their timber-rich plots under conditions reminiscent of the American West a century ago.

There is one difference. These modern-day pioneers have telephones.

The president of one of Alaska's fifteen independently owned and managed telephone companies tells how his men have installed telephones (color ones, to boot) in half-finished, hand-hewn cabins and had wives on the line minutes later talking to new neighbors just as if they were both back in Peoria."

These companies literally bulldozed their way into the telephone business.

In many of the far-flung Alaskan communities, roads are still the exception. So the crews move overland

by any means available. Many times, new subscribers have never seen a telephone!

Kotzebue, a hunter's paradise above the Arctic Circle, is one example of this. Service began a year ago. But now, an alert guide can spot a polar bear, telephone his New York client to hop a plane, and have the happy hunter back at his Wall Street desk in a few days with a memorable trophy.

A telephone for every Alaskan remains a goal for the future. But it is this daring-to-do, this striving to serve everyone, anywhere, which makes the Alaskan telephone companies characteristic of the more than 3,300 Independents which serve the nation.

In 11,000 growing communities from Maine to Hawaii—big cities as well as isolated small towns—Independent telephone companies are constantly strengthening their \$4 billion investment . . . to help you reach all America.

Get the facts about the Independent telephone industry and the ways in which it serves you. They're reported in "An American Story." For your free copy, write: Department 1010, U.S. Independent Telephone Association, 438 Pennsylvania Building, Washington 4, D.C.



INDEPENDENT TELEPHONE COMPANIES ARE INVESTING IN YOUR FUTURE—THROUGH BETTER COMMUNICATIONS

"a telephone for every Alaskan"—even if a tree stump is the temporary resting place. Here's the in-action spirit of Independent telephony in the fast-growing 49th State.



This advertisement appears in the October 14 issue of the *Saturday Evening Post*, one of a series published in behalf of America's Independent Telephone Industry.

PAGES WITH THE EDITORS (Continued)

companies prosper in this age of electronics and satellites.

* * * *

ANOTHER important activity of the USITA is the sponsoring of a Management Development Program every summer at the University of Kansas. The purpose of this is to train personnel at the managerial officer level for the independent group. A leading spirit in this movement has been KENNETH L. DALLY, vice president and director of personnel of the Western Power & Gas Company and its telephone subsidiaries. MR. DALLY, whose article describing the Management Development Program begins on page 580, has been a member of the USITA Employment Relations Committee since 1958. He is a frequent speaker at various conventions of the state and international independent telephone associations and has contributed a number of articles to the industry's trade journals. He maintains contacts with various universities and training institutes in the management development field, and his counsel is often sought by other organizations on related matters.

* * * *

WE have a well-known regulatory contributor in this issue, WILBUR C. KING, chairman of the Florida Railroad and Public Utilities Commission. His article on the 100 per cent dial conversion in Florida, which begins on page 594, reminds us that although Florida is the



WILBUR C. KING



JOHN D. GARWOOD

fourth state to reach the status of 100 per cent dial conversion, it is the first really large state to do so—the others being Delaware, Rhode Island, and Connecticut. Florida not only has over 2 million telephones, but is experiencing an explosive rate of growth throughout its entire economy. CHAIRMAN KING is a native of Zolfo Springs, Florida, where he was city councilman for twenty years. He became state senator in 1945 and a member of the commission in 1947.

* * * *

THE article on "The Government's Largest Enterprise—the Post Office," beginning on page 587, by JOHN D. GARWOOD, professor of economics of Fort Hays Kansas State College, deals with an operation which is not, strictly speaking, a public utility. Yet it covers an area of government monopoly which is, indirectly at least, a sort of slow-motion competitor with both the telephone and telegraph companies in the general field of communications. PROFESSOR GARWOOD is a graduate of Wisconsin University where he took his Master's degree, and the University of Colorado where he took his Doctor of Philosophy.

THE next number of this magazine will be out October 26th.

The Editors

For Integrated Communications Systems **BUDELMAN** Microwave and Carrier Offers Greatest Value!

This fact will find agreement in many places — the telephone and telegraph industries, railroads, pipelines, power companies, broadcasting networks, the armed forces, and state and local government agencies.

With more than a decade of solid product engineering behind us, we produce hundreds of specialized components which can be integrated into any given low or medium density communications system — at a very competitive cost! Even if your problem is new or highly specialized, you'll have good reason to contact Budelman... where custom systems engineering is always in high gear. Get more for your communications dollar. Call Budelman today!

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USE THIS HANDY CHECK LIST

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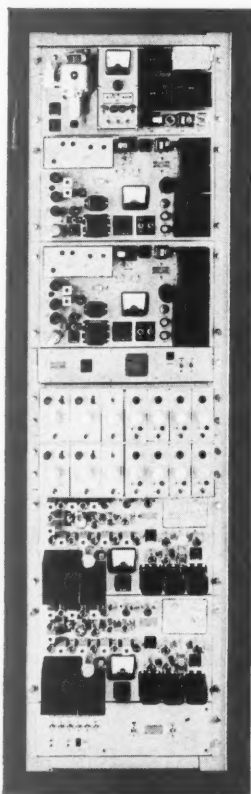
FAST PAYSTATION CARRIER

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IFICATIONS describing Budelman products
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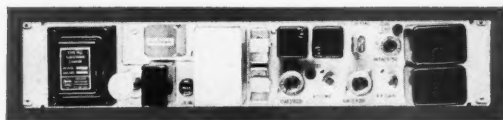


BUDELMAN 2KMC MICROWAVE LINKS (left)

For short-haul gap fillers or multi-hop repeater trunk circuits. Type 14CW-2KMC Radio Terminals are ideally suited for economical, trouble-free, point-to-point low and medium density multiplex communications. Down-to-earth engineering... straightforward design—no Klystrons or other critical components or circuits. The combination of these microwave terminals and Budelman compatible multiplex equipment proves in where other makes cannot.

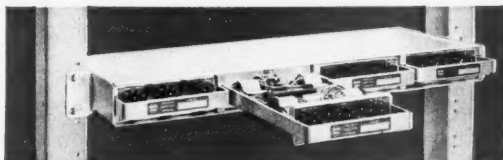
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New Budelman PLC-DR — 4 stackable channels (12-96 KC) each providing private line service OR 2-party service with selective ringing... converts from Private Line to 2-Party by simply plugging a tiny transistorized module into a carrier terminal. Lowest cost carrier!



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Coming in the Next Issue..

OCTOBER 26, 1961, ISSUE

VARIABLE ANNUITIES AND UTILITY PENSION PLANNING

Variable annuities are based on the principle that all retired persons need and want after their retirement is not a periodic fixed number of dollars but rather a reasonably consistent standard of living. How such payments can be made to reflect adjustments for loss of purchasing power during periods of steady inflation is a problem to which Willard F. Stanley, New York author of business articles, addresses himself. Utility managements which feel that the variable annuity idea offers benefits for both employee protection and improved employee relations may find in this article a helpful three-step procedure for bringing about such results.

A UTILITY FOUNDATION PROGRAM FOR PROFESSORS

William F. Barber, assistant professor of marketing at San Diego State College, San Diego, California, is among a number of college professors who were given the advantage of a summer training program of research in the field of actual public utility operation. Nineteen gas, electric, and communications public utility companies sponsored a total of twenty-eight college professors for such programs during the summer of 1961. Mr. Barber tells of the benefits he received and the benefits which he thinks sponsoring utilities can receive from such foundations for economic research and education.

REPRODUCTION COST AS A BASIS FOR AD VALOREM RAILROAD TAXATION

State tax laws commonly provide that real property must be assessed at "full value," "fair value," and similar expressions. Roy L. Lassiter, Jr., associate professor of economics at the University of Florida, has undertaken to consider the Interstate Commerce Commission's cost of reproduction as evidence of the market value of railroad property for purposes of ad valorem taxation. While the use of ICC basic data, which are brought up to date periodically, may suggest a tool for the tax assessor, yet, in the light of inflationary conditions and sub-normal railroad earnings, such methods could result in over-valuation for tax purposes.

AND IN ADDITION . . . Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.

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Remarkable Remarks

"There never was in the world two opinions alike."

—MONTAIGNE

SIR WINSTON CHURCHILL
*Former Prime Minister
of England.*

"Victory is a multicolored flower and transportation is the stem without which it will never bloom."

LUTHER H. HODGES
Secretary of Commerce.

"We cannot have mass production, mass employment, unless we first have mass stimulation of our latent wants."

W. L. GROTH
*Director of public safety,
Richmond, Virginia.*

"It seems to many of us that, before we bewilder drivers with more illuminated signals, we should teach them how to use the simple ones now at their disposal."

DAVID L. LAWRENCE
Governor of Pennsylvania.

"Every major law, every public document, every single effective and lasting program in American history has been the result of proposals, debate, compromise, and agreement."

ROBERT PENN WARREN
*Excerpt from "All the
King's Men."*

"The law is like the pants you bought last year for a growing boy but it is always this year and the seams are popped and the shank bones to the breeze. The law is always too short and too tight for growing human-kind."

JACOB K. JAVITS
U. S. Senator from New York.

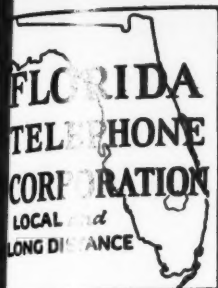
"Our own experience has been that competitive private enterprise has produced a higher standard of living with less governmental dictation than anywhere else in the world. It would be a paradox indeed if, in our efforts to aid the less developed areas in the world, we overlooked the rôle of private enterprise and thus failed to use our most effective economic resource . . ."

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*Executive vice president and
general manager, KTRK-TV.*

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DREW PEARSON
Columnist.

"At times the communication lobby operates as if it were above the law. This does not result from watching its own Westerns. Nor does it result from the favorite excuse of the TV moguls: 'We are a very new industry, we are making the mistakes of the uninitiated.' It results solely from the fact that radio and television are the most powerful media of expression in the nation, in some cases enjoying monopoly rights to influence the mind, the morals, and the education of America. Such power inevitably generates a swaggering confidence that one is above regulation."



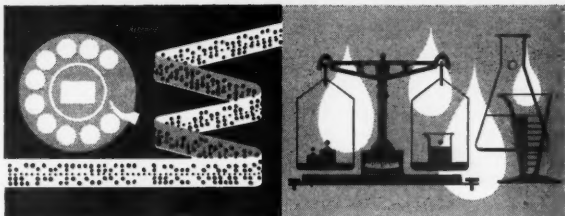
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Serves An Area
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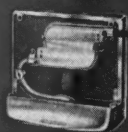
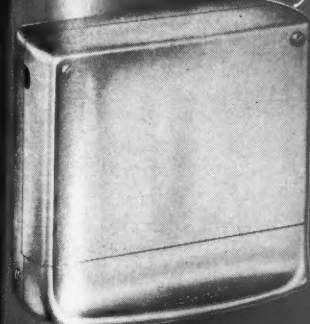
California Water & Telephone Company provides modern service to more than 180,000 telephones in diverse areas of Southern California. The Company's telephone properties now rank 10th in size among the nation's 3,300 Independent telephone companies. By the end of this year, the Company's telephones will be 100 per cent dial operated.

Our water properties, located in part of Los Angeles County, portions of San Diego County, and on the Monterey Peninsula, provide water service to an estimated population of 275,000 in these rapidly growing areas.

Total plant investment exceeds \$120,000,000.

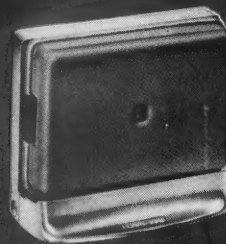
CALIFORNIA WATER & TELEPHONE COMPANY
300 Montgomery Street • San Francisco, California

*beauty, uniformity
and economy!*



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encloses Amphenol
plugs and jacks

MODEL 102
WITH STANDARD
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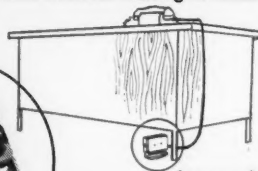
Model 103 includes the matching cover in chrome or brass satin finish. The cover encloses the amphenol plugs and jacks when used with key telephone sets or other complex equipment.

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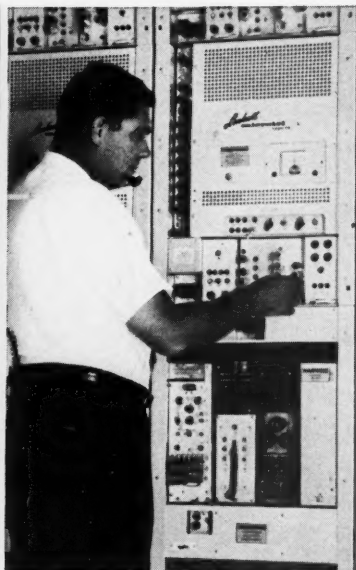
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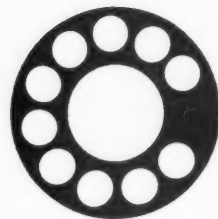
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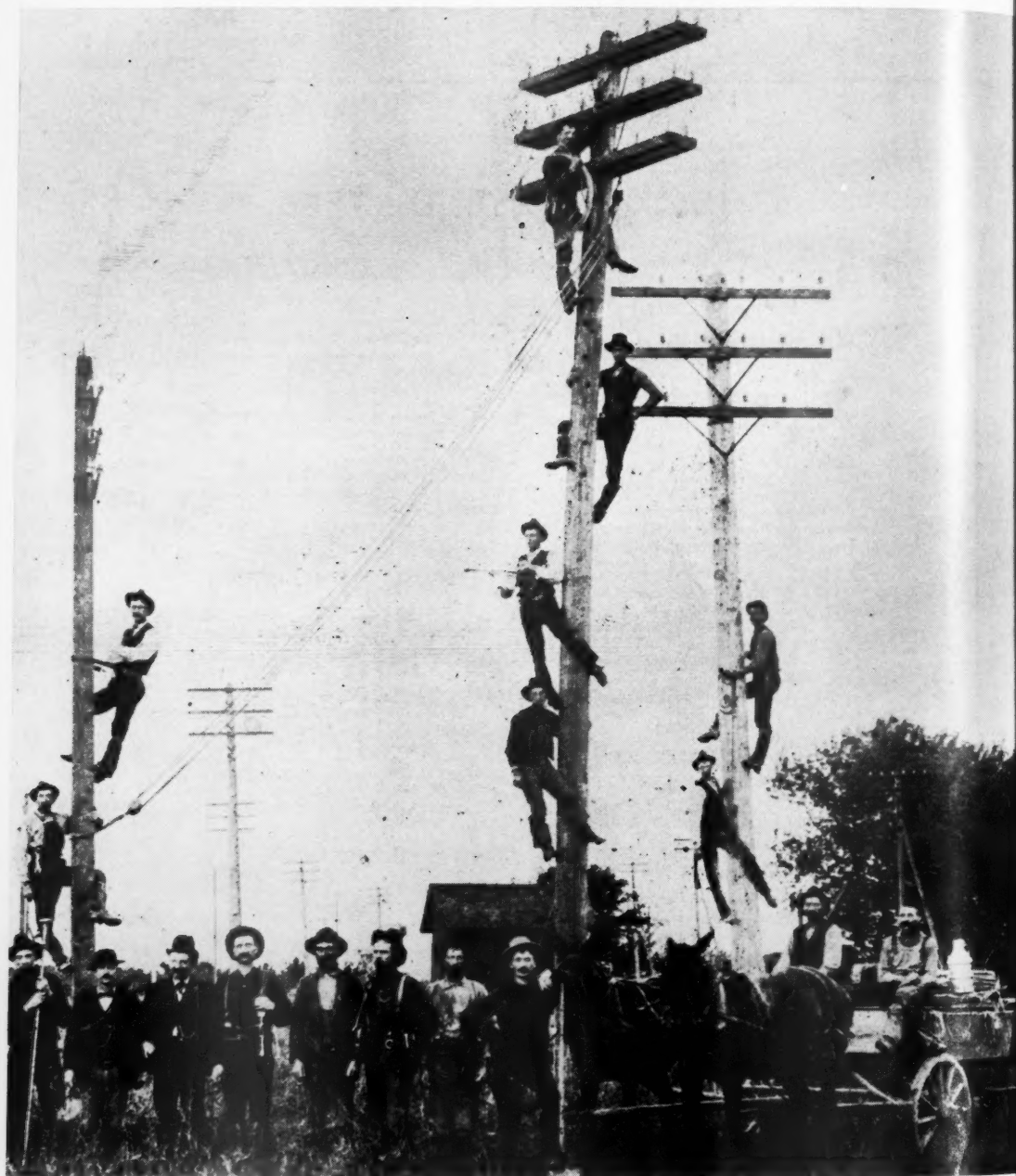
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Utilities Events Calendar

CHECK THESE DATES:

- Oct. 12-13—Edison Electric Institute, Transmission and Distribution Committee, will hold meeting, Des Moines, Iowa.
- Oct. 12-13—Florida Natural Gas Association will hold distribution conference, Palm Beach, Fla.
- Oct. 12-13—Public Utilities Advertising Association, Region 8, will hold meeting, Galveston, Tex.
- Oct. 13-15—American Association of Advertising Agencies will hold board of directors' meeting, Chicago, Ill.
- Oct. 15-18—American Water Works Association, Southwest Section, will hold annual meeting, San Antonio, Tex.
- Oct. 15-20—American Institute of Electrical Engineers will hold fall general meeting, Detroit, Mich.
- Oct. 16-18—Northwest Electric Light & Power Association, Business Development Section, will hold meeting, Spokane, Wash.
- Oct. 16-19—American Transit Association will hold annual meeting, Dallas, Tex.
- Oct. 16-20—National Safety Council will hold meeting, Chicago, Ill.
- Oct. 17-19—Eastern Industrial Traffic League will hold annual meeting, New York, N. Y.
- Oct. 18-19—Wisconsin Utilities Association, Electric, Gas Operating, and Sales sections, will hold convention, Milwaukee, Wis.
- Oct. 18-20—American Water Works Association, Iowa Section, will hold annual meeting, Cedar Rapids, Iowa.
- Oct. 18-20—Electric Council of New England will hold annual conference, Boston, Mass.
- Oct. 19-20—American Gas Association will hold marketing research seminar, Chicago, Ill.
- Oct. 19-20—American Society for Quality Control will hold midwest conference, St. Louis, Mo.
- Oct. 19-20—Kansas Telephone Association will hold fall meetings, Hutchinson and Topeka, Kan.
- Oct. 19-20—National Conference on Industrial Hydraulics will be held, Chicago, Ill.
- Oct. 19-21—Advertising Federation of America, Third District, will hold convention, Durham, N. C.
- Oct. 19-21—National Society of Professional Engineers will hold meeting, Roanoke, Va.
- Oct. 23-24—Edison Electric Institute, Electrical Systems and Equipment Committee, will hold meeting, San Francisco, Cal.
- Oct. 23-24—South Carolina Telephone Association will hold annual convention, Clemson, S. C.
- Oct. 23-25—International Water Conference of the Engineers' Society of Western Pennsylvania will be held, Pittsburgh, Pa.
- Oct. 23-26—National Association of Corrosion Engineers, South Central Region, will hold conference and exhibition, Houston, Tex.
- Oct. 23-26—National Association of Educational Broadcasters will hold convention, Washington, D. C.
- Oct. 23-27—National Metal Exposition will be held, Detroit, Mich.
- Oct. 25-26—Great Lakes Public Relations Workshop will be held, Milwaukee, Wis.
- Oct. 26-27—Virginia Telephone Association will hold annual convention, Roanoke, Va.
- Nov. 8-9—Oklahoma Telephone Association will hold annual convention, Oklahoma City, Okla.
- Nov. 11-13—Alabama-Mississippi Telephone Association will hold annual convention, Birmingham, Ala.



Courtesy, The Pacific Telephone and Telegraph Company

Building Toll Lines, Circa 1894

Construction crews of so-called "heavy gangs" such as the one pictured here built the early long-distance lines in California in this manner. One peculiar problem of the day was that lines had to be high enough to clear loads of hay and threshing rigs.

Public Utilities

FORTNIGHTLY

VOLUME 68

OCTOBER 12, 1961

NUMBER 8



What's Ahead for Independent Telephony in 1962?

Anticipating the forthcoming meeting of the USITA at its sixty-fourth annual convention in Chicago, Illinois, October 8th to 11th, this author discusses the ways and means by which the national association helps the independent (non-Bell) companies prosper in the age of electronics and satellites.

By FRANK G. LaPRADE*

First Vice President, United States Independent
Telephone Association

ABOUT this time every year, as the United States Independent Telephone Association prepares for its annual convention in Chicago, there are the usual statements, from company executives down to district foremen, admonishing and warning the association of the problems which lie ahead and of the many great things which have been accom-

plished in the USITA's past, and of all the greater things which challenge the country's independent telephone companies in the years to come.

It would not be out of place to repeat the same challenge this coming year. The year 1962 will be one that holds untold promise for the alert and, at the same time, pitfalls for the unwary. To use hackneyed words, but ones which are still very applicable, 1962 will be a year

*Also president, Lee Telephone Company, Martinsville, Virginia. For additional personal note, see "Pages with the Editors."

PUBLIC UTILITIES FORTNIGHTLY

in which "far-reaching developments" will lead to "untold benefits" for all segments of the telephone industry.

The challenge facing the independent telephone companies is that they must be able to muster sufficient courage, initiative, and resourcefulness to "go out and get" their rightful and deservedly earned share of the boundless benefits which will result from a fast-changing world, and faster-changing communications industry.

The USITA member companies face the coming years in an enviable position. The more than 3,000 persons who will attend this year's sixty-fourth annual conclave at Chicago on October 8th to 11th will represent close to 3,500 strong and vibrant member USITA companies.

FOR years people have been saying that the communications industry has been on the "threshold" of one of its most promising and fascinating eras. USITA companies should take upon themselves to see that 1962, which will be kicked off at the coming convention, will be the year in which the telephone industry actually crosses this threshold and at least begins to enjoy its reward. This reward will not be handed to the independent telephone companies on a silver platter. Their position in the overall telephone picture still implies the need to work and labor for everything they will receive. This ability and will to overcome obstacles and fight for the earned benefits of their efforts has characterized the independent telephone concerns for several decades.

If they wish to advance into the promising decade ahead, these same companies will have to maintain the same ambition and effort which they have manifested to such good results in years past.

The years to come are like a dark cave full of rich but hidden treasure. No one will hold a lighted candle for the independent telephone companies. They will have to, through their own efforts, strike the match and light the candle themselves. Thus they will come to see all the riches that lay before them. They may even have to undertake a little digging to reach the hidden treasure, but, in the end, if the effort is made, the result will be rewarding.

THE USITA's members are in a good position, at the end of 1961, to accomplish all the things which the nation and the telephone industry expect of them. Statistics show that there are more telephones serviced by independent companies than ever before in the history of the USITA. In 1960, there were 11,428,000 independent company telephones in the United States and Puerto Rico. This was an increase of 643,000 over the previous year, and the largest annual jump in the past four years. Only in the boom year of 1955, in all of the past ten years, was there a greater annual increase in the number of independently serviced and owned telephones.

The United States Independent Telephone Association is entering the decade of the sixties with somewhat fewer operating companies than previously. Rather than a sign of weakness, this is an indication of strength. While the overall number of companies is shrinking, those concerns which remain are expanding plant facilities and service at a record rate.

Remaining Companies Stronger

MERGERS and consolidations for numerous reasons, such as joint or ad-

WHAT'S AHEAD FOR INDEPENDENT TELEPHONY IN 1962?

jacent service territory, financial inadequacies, smallness of economic entity, continue to eliminate smaller companies, causing them to join with other companies. The result is that the remaining concerns are generally stronger, larger, more far seeking, hopefully prepared to offer better and more extensive service, and carry on the ever-expanding need for research and development.

Research and development are the areas in which the independent telephone companies can firmly and decisively assert their claims to leadership and progress. In this they are supported by the strength and resourcefulness of the independent manufacturing industry.

The history of the USITA shows that inventiveness and resourcefulness have been the great assets of the independent telephone industry. The independent industry has been responsible for a number of major technical advances in the telephone field, from the development and installation of automatic, or dial, service, to, in more recent times, handset telephones and direct operator dialing over long-distance lines.

The profit possibilities of new developments in the "space age" will justify the spending of literally billions of dollars for research in the years to come. The fruits of this far-reaching research will result in practical workability, of benefit to the whole industry, just as has been the case in the past, and in the face of even greater pressure and difficulties.

WITH the consolidation of plants and companies, the remaining independents are generally in a better financial position than in years past. They have

a total plant investment of more than \$4 billion and annual operating revenues of more than \$1 billion.

The 1960 total investment in plant was at a record high and showed an increase of close to \$500 million over the previous year. Likewise, total operating revenues were higher than ever before in the USITA's history, taking a jump of more than \$104 million over 1959. One hundred and one companies grossed more than \$1 million each. That the financial position of the independents has become steadier, and has been growing steadily, can be shown by noting in 1958 there were only 93 concerns with a gross annual income of more than \$1 million.

TOTAL capitalization of companies approached \$3 billion during 1960. This was an increase of more than \$313 million over the previous fiscal year. At the same time total assets rose to \$3.25 billion, a jump of close to \$400 million. The biggest part of the independents' assets



PUBLIC UTILITIES FORTNIGHTLY

was, naturally, in their telephone plant. In 1960 this was at a record high, totaling more than \$3.5 billion before depreciation and amortization reserves.

Recent USITA estimates indicate that 1961 will show an even greater growth in the physical and economic strength of the independent telephone companies. Predictions are that by the end of this year there will be 12,075,000 total independently owned (non-Bell) phones in the fifty states and Puerto Rico. The number of exchanges, at the end of 1961, will have risen to 10,695, and the total investment in telephone plant will reach close to \$4.5 billion, the USITA forecasts.

Mushrooming Service Demand

THE independents have done well in selling their services to the public. The nation-wide desire for additional telephone service, due to the mushrooming population growth and the ease by which everyone in the country can afford a telephone, has caused the whole telephone industry to strain itself to keep up with the fast multiplying demand for service. The independent telephone companies have kept pace with this demand and can still say that out of every seven phones in this country, one is owned by an independent.

The United States Independent Telephone Association, during its 1958 convention in Chicago, voiced the hope that if present population growth and economic trends continued as they were then, the independents would be serving some 11 million telephones by the end of 1960. This goal has been realized successfully.

At the same time, an even further reaching goal was envisioned. This was

that by 1975 independent telephone concerns would have in operation some 25 million telephones. This seemingly fantastic goal is now much closer to realization. The continued phenomenal growth of the telephone demand makes it more likely that the independents will realize this goal of more than doubling the number of telephones in operation in 1960 during the subsequent fifteen years.

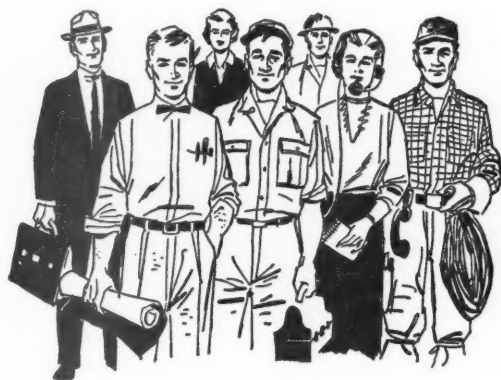
WITH the increase in population anticipated during the years immediately ahead, with the diffusion of this population over the entire land area of the country, particularly in the rural and suburban localities where so many independent companies are located, and with the possibilities of increased usage of telephone equipment promoted by aggressive and modern sales and merchandising efforts, the future of the independent industry is as bright as hard work and initiative can make it.

The expansion of many areas adjacent to large metropolitan centers has made giants out of independent companies that were relatively tiny only a few years ago. The indications are that this trend will continue, at perhaps an even greater rate. The potentials for the advancement of telephone companies in these regions, and throughout the nation, are boundless.

The very nature of communication will be another important factor in the changing aspect of the telephone industry. Great strides have been made in the past decade and a half, and more rapid progress is a foregone result of the future.

The world's communications system will become increasingly complex, and

WHAT'S AHEAD FOR INDEPENDENT TELEPHONY IN 1962?



the independent companies must adapt themselves to this challenge.

A challenge very much on the horizon is the developing field of long-distance communications via space satellites. The Bell system, Radio Corporation of America, and others, have signed agreements with the National Aeronautics and Space Administration which will result in the launching of space communications satellites in 1962.

Changing Communications Picture

THE whole concept of transoceanic and global communications will be radically changed with the operation of these

microwave relay stations orbiting in the skies. The Federal Communications Commission and President Kennedy have both made it clear that all telephone companies, including independents, will be able to share in any benefits of the space communications satellites.

These satellites are expected to revolutionize the world's long-distance communications picture. The nation's long-distance facilities, furnished primarily by the Bell system toll network, are interconnected with independent telephone

company lines. Long-distance traffic between the two segments of the industry is freely interchanged and agreements have been in effect for some time covering routings and division of revenues on the interchanged business.

The new space satellites will result in an improvement of this long-distance service, and the independent companies and their customers will be able to fully share in the new advances in telecommunications which the space communications age will engender.

THE space communications age will also open up several expected new developments for which the independents must be prepared. Every day the industry finds itself with a new advance in communications being laid in its lap. Voice communications, as it exists now, will, in the near future, probably be replaced or at least supplemented by a true communications system, providing for the transmitting of all types of information and data by electrical transmission. These facilities include teletypewriter, facsimile, and telemetering service, and the equipping of telephones with visual adjuncts.

PUBLIC UTILITIES FORTNIGHTLY

Some of these are already a practical reality, and the latter is a possibility within this decade. Engineering experts are also experimenting in an effort to make closed circuit television, data processing facilities, and other electronic innovations available and economically feasible for short distances.

The independent telephone companies, if they are to provide a complete communications service in the areas which they serve, must continue research, planning, and preparation to meet these anticipated future demands.

THE ultimate challenge the industry faces is simply that of more service and better service at the customer level. Though the nation's expanding population will continue to demand growth in its telephone service, the industry must be ready to meet the higher standards of communications that will be expected and needed by tomorrow's subscribers. This will require continued high-quality service, fostering of research, and generating of public confidence in the individual independent telephone company, and the industry as a whole.

Part of the success of the campaign to improve customer relations by the independent concerns will lie in their continued fight against legislation which discriminates and hinders the industry on the local, state, and federal levels. Independents must realize that the outcome of the battle on the legislative front has been, and will continue to be, of the utmost importance to the telephone industry.

Through the efforts of the United States Independent Telephone Associa-

tion, which has supported the interests of the independents in the halls of the nation's capital for many years, from its headquarters in Washington, D. C., both the Bell system and the independent companies have been assured of a voice in all legislative hearings which may have some effect on the industry.

IT has become apparent that as the telephone industry, and the rest of the world, becomes more complex and interrelated, the USITA's legislative vigilance must become more intensive and extensive if the interests of the companies it represents are to be adequately presented. The idea of individual companies undertaking this task is frightening to contemplate, and so it is to the USITA that its members, and the rest of the independent telephone companies, will look for guidance and leadership in this field.

The independent companies must continue to fight against the discriminatory 10 per cent federal excise tax on all telephone calls which was extended for another year by the 87th Congress. Customer and company resistance must be stimulated if the industry is to be successful in bringing about its removal in the coming years, and preventing its replacement by some other form of equally unfair tax.

Co-operation between all segments of the telephone industry will also result in the presentation of better service to all customers. Co-operation and mutual understanding of the other's problems will lead to joint effort and solidarity. This is necessary in such diverse fields as legislative watchfulness, public relations, and development.

WHAT'S AHEAD FOR INDEPENDENT TELEPHONY IN 1962?

Industry Co-operation

A CONCRETE example of how recent joint effort has produced results beneficial to both the Bell system and the independents is in the introduction of direct distance dialing (DDD). It is now in use among a substantial number of the nation's larger metropolitan areas, and the day when its use will become universal throughout the country is not far away. Obviously, close co-operation between all parts of the industry was required to solve the problems of uniform telephone numbering, equipment at local central offices and toll switching points, automatic recording equipment, and adequate toll circuits.

Such co-operation has led, and will continue to lead, to numerous benefits to the telephone industry.

These advances in technology and service must be passed on to the public through a modernization and intensification of marketing and public relations. New ideas and methods of marketing are needed to enlighten the customer of the rewards he will reap from increased use of telephone service.

Expansion of service and the selling of this service will curtail the dependence of the industry on periodic rate increases as a means of maintaining or increasing earnings. Customer understanding and good will, and ever-increasing use of basic services, must, as far as possible, share the burden of giving a company a

sufficient share of the consumer's dollar.

THIS customer education will come about through the use of aggressive institutional and human-contact programs tailored to the needs of the individual independent company.

The goal of this program will be to develop continuing customer acceptance of, and reliance upon, complete telephone service. Into this picture steps such modern telephonic miracles as DDD, wide area telephone service (WATS), and others. The easier it is for the telephone customer to call outside his local area, and the less worried he is about extra costs, the more service he will utilize.

It is to the extension and acceptance of those services that the industry should bend its efforts.

The future of the USITA, and of all the nation's independent telephone companies, is a bright one. New opportunities are constantly arising. The national association and its members are inextricably linked to the continual potential for growth that the independent telephone industry possesses.

Working together, in a program dedicated to prosperity, strength, and growth, there is every indication that the USITA and all the independent telephone companies will continue, as they have in the past, to provide constructive leadership in the communications industry, and serve as a vital force throughout the nation.

Q "TO hear our leaders, practically everything that happens here hurts our image abroad. Well, why don't they bring our image home and put it to work like the rest of us?"

—FLETCHER KNEBEL,
Columnist.

America's Greatest Relatively Undeveloped Resource

A description of the intensive annual management course given to independent telephone industry officers and other personnel at a four-week resident program at the University of Kansas, School of Business (Lawrence, Kansas). This course is sponsored by the United States Independent Telephone Association for the benefit of its member companies.

By KENNETH L. DALLY*

How did the United States Independent Telephone Association happen to become interested in setting up a Management Development Program?

What led to this program being conducted at the University of Kansas?

These undoubtedly have been the most frequently asked questions since the course was started in 1958. They have also been among the questions which the

USITA sponsors most frequently have enjoyed answering during this same time interval.

ROBERT J. FEGAN, USITA's esteemed Personnel Committee chairman, who also happens to be manager of Junction City Telephone Company at Junction City, Kansas, thinks the second of these questions is superfluous. Bob just so happens to be an alumnus of the University of Kansas and naturally favorably disposed to his alma mater.

In order to remove any question of

*Vice president and director of personnel, Western Power & Gas Company and telephone subsidiaries, Lincoln, Nebraska. For additional personal note, see "Pages with the Editors."



AMERICA'S GREATEST RELATIVELY UNDEVELOPED RESOURCE

bias, however, and give Kansas University its due and proper credit, it should be explained that no member of USITA's Personnel Committee was an alumnus of Kansas University when the original agreement providing for this program to be conducted at Lawrence, Kansas, was negotiated. Ray Dalton (now deceased), formerly vice president and general manager of West Coast Telephone Company, Everett, Washington, was chairman of our committee at that time.

Other independent telephone industry members of the committee, by the way, include Ralph Beck of Honolulu, Hawaii; Joe Galloway of Winter Park, Florida; Adam Schwartz of Rochester, New York; and Bert Steele of New York city.

INDEPENDENT telephony includes 3,300 companies — with \$4 billion invested in telephone plant; with 100,000 employees; serving over 11 million telephones and having gross revenues of approximately \$1,028,500,000 per year.

It was early in 1956 that USITA and its Personnel Committee first started giving serious thought to the possibilities of establishing a Management Development Program for independent telephony. Our segment of the telephone industry was then growing faster than ever before, and even greater growth and expansion were immediately ahead of us. Our work was becoming more and more complex; labor and material costs were at an all-time high; and many of our management people, a substantial proportion of whom had come up from the ranks, were facing continuous rounds of challenging problems.

Every position on independent tele-

phony payrolls was growing, and it is still growing, in its importance. We recognized then, as we recognize now, that all of us need to grow with our jobs, or, like old telephone equipment, we soon would be obsolete. We could not help but recognize the need for more training of employees in general at lower levels of instruction. But we were particularly concerned about those in management positions. We recognized our obligation to do something constructive to help member companies meet these training needs.

WE started reviewing details of many similar programs and particularly those we had participated in, giving close attention to the strong as well as the weak points of such programs. Whenever we held a committee meeting, we thoroughly discussed these details and from time to time reviewed and exchanged ideas and opinions with directors of well-established public utility, and other, management development programs.

Our committee's research and development work continued for a couple of years before our first program was finally made effective. During this period, we visited numerous universities and large companies which had well-established management development programs. While, at the time of these visits, we did not have clearly in mind all of the things we finally would want to include in our program, we did have some fixed ideas of things we would want to include and things we would want to avoid, so the trips we made actually involved more than just looking over campuses and visiting with university officials.

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Experienced Faculty

OF course, we regarded faculty as our first consideration. In this connection, we wanted well-qualified experts in each particular field, with good ability to communicate their intelligence. We wanted to reserve the right to enlist some of our faculty from other universities or perhaps from industry, whenever this might be important. We recognized the necessity of our having a very well-qualified and experienced director for our program, and, if possible, one experienced in working with telephone management personnel.

We wanted air-conditioned classrooms and dormitories; good food and some provision for recreation; and we regarded it as a must that the school be located away from the competition of large cities.

Last, but definitely not least, we wanted to be sure that the university we set up our program with would continue to be enthusiastically interested in the conduct of our program.

I doubt if faculty members often are

given closer scrutiny as a part of any consideration than we gave them. Since there are many sources of information about various universities, their officials and faculty members, this proved to be a Herculean task. We probably never would have completed it, except for the untiring assistance of some well-qualified research librarians who became so interested in what we were doing that they, in effect, did much of it for us.

As a result of this checking and the contacts that I made with officials of various universities, I now understand much better than I did before that people are largely the same wherever we go and that our schools of higher learning have their personnel and human relations problems too.

While I have a high regard for every institution of learning that is really doing its job, I also know that the faculty members of most universities would benefit materially through their participation in just such a program and through their benefiting, many others also would receive benefits which, as you know, are long past due.

As indicated, we found there was work connected with setting up this program, and many complications were encountered along the way. One day when I was in the office of my good friend, Gordon T. "Bill" Bowden, personnel research supervisor of the American Telephone and Telegraph Company in New York, reviewing the facts of the situation as we had found them, he mentioned that he knew a good man at Harvard University who, he was sure, would be interested and who would do a good job for us if his previous commitments would permit.



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WITH as many years as I have had in the telephone business and as much confidence as I have in Mr. Bowden, it was automatic for me to suggest that we use some of our wonderful facilities and learn as much as possible. The operator reported back, however, that Bill's friend was at that very moment in Halifax, Nova Scotia, conducting a management development program.

A couple of days later, I called the gentleman at Halifax, Nova Scotia, from our Virginia division office at Charlottesville, Virginia. During only a few minutes of conversation, I learned that I was talking to a man who really understood what we were interested in; who was experienced in this work and in working with telephone management groups; and that he definitely would be interested in helping us with our program. He told me he had accepted appointment as dean of the School of Business at Kansas University, and we made a tentative arrangement for a conference to be held there soon after his arrival.

A FEW weeks later, this able and interested gentleman from Harvard—Dr. James R. "Jim" Surface—and I met in Lawrence and thoroughly reviewed all phases of the consideration. I met several of the other university officials and faculty members; was shown some of the campus, and particularly the Douthart and Grace Pearson halls, the Student Union, and the old School of Business Administration building. I looked over other parts of the campus, the city of Lawrence, transportation schedules, weather records, etc., and made my report to other members of our committee.

The facts spoke for themselves. At my suggestion, our committee came, raised questions, received answers and generally saw for themselves. On January 18, 1958, in conformity with a recommendation of our committee, USITA entered into an agreement with the University of Kansas, School of Business, for the first USITA Management Development Program which was conducted there during the summer of 1958.

Undoubtedly the experience and observations of our "alumni"—men who have taken the course—well understood by now, America's greatest relatively undeveloped resource lies in the ability of its citizens to think. It is not sufficient, however, for us to be only disturbed and concerned about things that we individually and collectively have capacities, opportunities, and responsibilities to improve.

Wasted Energy

IF all of the time consumed in complaining, in criticizing, and in loose talk, by people who are capable of contributing to the improvement of the situations referred to, could be converted to productive use, this world would be much better off and the importance and happiness of the individuals involved would be substantially increased.

Granted that some of our citizens are doing more effective thinking, within specific areas, than has ever been done before. But there is basis for serious question as to whether most of our citizens are thinking as much or as well as they did previously.

A few months ago, I was flying to Washington, D. C., with an engineering manager for one of our country's largest

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manufacturing companies. He told me that, for example, his company only hires graduate engineers who are in the top 10 per cent of their class, and yet they are distressed to find that although these young engineers recite rules and formulas with precision, three-quarters of them have not learned how to think. As he also indicated, employers generally are not vitally interested in knowing specifically what any of us learned in school, but they are vitally interested in finding out what we can do and whether we have learned how to think.

HE told me about an improvement in some of their manufacturing equipment that they had been working on over a long period of time; that after numerous efforts to expedite completion of this improvement, he found it necessary to go to the location of the plant involved. At that plant, he met with the numerous executives and manufacturing engineers who had been working on the project and listened to each one tell of the problems he had been experiencing in his efforts to get his part of this improvement completed.

AFTER a couple of days of listening and giving careful consideration to each of the comments made, it occurred to him that a big part of the problem might be growing out of the fact that they were trying to fit a part of the combined unit into a small eight-inch area. Consequently, he asked each man around the conference table to indicate whether the problem would be alleviated, so far as his part was concerned, if the eight-inch area was increased to a foot or even to as much as 18 inches.

After several more sessions, it became apparent that all parts of the problem would be removed if this eight-inch area could be expanded to a foot. He then inquired as to why they had concluded that this particular part of the unit needed to be confined to an eight-inch area.

The only answer was that such a limitation apparently had been assumed from one of the preliminary drawings.

These learned men, all experts in their respective fields, had set up an artificial, seriously delaying, barrier between themselves and their objective, and despite numerous conferences over an extended

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period of time, they had failed to think the problem through.

MANY management people might benefit materially by giving some thought to the comments my son Bob expressed when he returned from his first year in college. He said that one of the things most of his associates had concluded right at the start was that they needed to make a plan for the proper allocation of their time. They knew that they needed to reserve time for study, discussion, exercise, recreation, and sleep; and that they must not allow television, for example, to interfere with such reservations as it has come to do in most of our homes.

He and his associates had concluded that television is a wonderful invention with far-reaching potentials for good, but that its cost to date—in view of the way it is being used—is far in excess of its benefits; that, in many instances, it has changed homes from places where adults and youngsters alike beneficially exchanged and tested their thinking, to a glum place where there are disagreements over programs to be listened to, and then a silence that is almost deadening so that nothing will interfere with their watching and listening to the wild and woolly western or the bloodcurdling murder mystery.

Leaders and Followers

SEVERAL years ago, Michael J. Boyle, who for many years was one of our country's most powerful labor leaders, said, during a luncheon conference with me and a couple of others, "Don't you know that anyone who can think, who has courage, and will stand on his feet

and talk, can associate himself with three or four others with similar abilities, and together they can easily and quickly lead up to 1,500 or more people—one way today and another way tomorrow—because," he explained, "there is about that kind of ratio between leaders and followers."

And then in a comment addressed to me, Mr. Boyle said, "Don't look so complacent about this, Dally. It is just as true among management groups as it is among union groups."

While I have not liked this indictment of most management people, we, evidencing our ability to improve, must admit that most of us have not been thinking things through as well as we should, and in this respect, at least, we have been giving strong support to Mr. Boyle's allegation.

If our well-qualified citizens fail to do their share of the clear, perspective thinking that needs to be done, then what kind of leadership can we reasonably expect and what will be our destiny?

EVERYONE, consciously or unconsciously, is anxious that his importance be recognized, and yet many of us are failing, day after day, to do the very things that would give us importance.

How do we gain importance, except through our making contributions to our families, to our companies, and to our fellow men generally, which are at least as great as the benefits we receive from them. And how do we make any real contributions, except through the intelligent, productive expenditure of mental and physical efforts which means work.

Somehow we must stop, and help our associates stop, underestimating the im-

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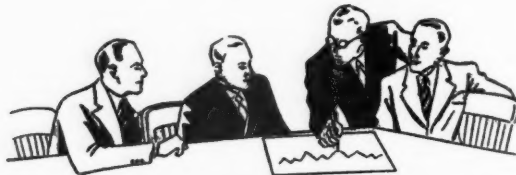
portance of our work, whatever it is, and give greater recognition to the facts—that through our work, we make contributions which help to justify our existence and give us, our families, and our companies the importance, the security, and the happiness we all seek.

When our committee, Dean Surface, and his associates set up the USITA Management Development Program, our main objective was not primarily to make our trainees and the work of their companies easier, but rather to make their accomplishments and importance greater.

BUT let us get back now to the 1961 USITA Management Development Program. The real test as to whether our graduates, our committee, Dean Surface, the faculty, and others who have assisted

with this program have done well, depends not upon what we may think about or say about it, but upon the extent that the trainees and their companies are going to benefit in the years that lie ahead and as a result of their participation in this program.

THEY inevitably will be demonstrating the answer, during each day of the next several years. While doing so, they will continue to recognize that none of us, as individuals, accomplish very much; that the best efforts of each of us must be integrated with the best efforts of the overall team, if we are going to get important jobs done well. We hope the records finally will establish that this entire program has been well done and worthwhile.



1961 Faculty of the USITA Management Development Program

*Held at the University of Kansas, Lawrence,
Kansas, July 16 to August 11, 1961*

DR. JAMES R. SURFACE, director of the program and dean of the University of Kansas, School of Business; Roger L. Singleton, assistant director, instructor, University of Kansas, School of Business; Philip B. Hartley, assistant professor of business administration, University of Kansas; Thomas E. Miller, associate professor of business administration and human relations, University of Kansas, School of Business; Ronald R. Olsen, assistant professor of economics, University of Kansas; A. J. G. Priest, professor of law, University of Virginia, and former chairman of Section of Public Utility Law of the American Bar Association; Bertram L. Trillich, Jr., assistant professor of marketing, University of Kansas, School of Business.

The Government's Largest Enterprise—the Post Office

This covers an area of government monopoly which is, indirectly at least, a sort of slow-motion competitor with both telephone and telegraph companies in the broad field of communications. Critical of the mounting deficits and deteriorating service standards in the Post Office, Professor Garwood ventures some corrective suggestions.

By JOHN D. GARWOOD*



THE Post Office at Seattle one time badly needed a tow truck for its own breakdowns. Washington, however, wouldn't approve the purchase. Then the Seattle postmaster learned he could buy an Army-surplus tow truck, new, for \$1. So he went ahead and bought it? Oh, no. He had to write Washington for approval. But Washington answered: 'No.' Thought the postmaster then: 'I'll buy it myself; give it to the department.' But he couldn't—not without first writing to Washington. And the answer was 'No.' The number of breakdowns in Seattle didn't require a tow truck, Washington believed; and it was contrary to procedure to allow any local

postmaster on the scene to act on his own judgment and initiative."¹

And so it is in red tape. Although in the decade since 1951 many of the shortcomings of the Post Office have been corrected, yet cast into the frame of reference by which individual businesses are judged, the Post Office still has far to go.

TODAY the Post Office is the largest government enterprise in the free world. In fiscal year 1962 (July 1, 1961-June 30, 1962) estimates indicate 582,000 people will be employed by the Post Office. The 1962 forecast estimates that 35.3 billion first-class letters and cards will pass through the mail slots of the na-

*Professor of economics, Fort Hays Kansas State College, Hays, Kansas. For additional personal note, see "Pages with the Editors."

¹"So They're Redoing the Post Office," by C. Lester Walker, *Harper's Magazine*, June, 1951, pp. 37-45.

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tion's post offices. Air-mail items are estimated at 1.5 billion. In addition, it is estimated that the post offices will handle 7.9 billion magazines and newspapers, 1 billion parcels, 19.8 billion pieces of advertising circulars, and 2.6 billion pieces in all other categories of mail.²

The postal deficit for fiscal year 1962 is put at \$843 million, a little over 1 per cent of total estimated federal expenditures. Unlike private enterprise, the Post Office may rely on receiving aid from the taxpayer. Historically this deficit has become larger, not smaller.

Organization of Post Office

CONGRESS was given the power by Article I, § 8 of the Constitution, "To establish Post Offices and Post Roads." A postal system including 74 offices was established by Congress in 1789. Initially set up as a separate agency under the President and submitting reports to the Treasury, the Postmaster General was admitted to the Cabinet by President Jackson in 1829.

For the first twenty-five years after 1789, the Post Office was operated along private business principles and a profit was made in practically every year. After 1814, however, and with the ascendancy of Andrew Jackson to the office of President in 1829, the postal arrangements came to be dominated by purposes of "improving services" even at a loss, and serving as a political and cultural vehicle. Political control of personnel became an established policy under the "spoils" principle promoted by Jackson. Franking privileges to Congressmen and other per-

sons were extended, largely to aid partisan ends. Thus, with the coming of partisan politics and the policy that the postal service should be extended to all persons in the United States, social and political objectives replaced business principles. The Post Office became a separate executive department in 1872.

ALTHOUGH in many respects the Post Office is organized much as a private business is organized, with responsibility centered in the chief executive—i.e., the Postmaster General and the tier of subordinates responsible to him—yet the department is not operated as a private business is run. The top 20,000 jobs, which include the first-, second-, and third-class postmasterships, are filled through political appointment, thus jobholders vary with changes in the political party in power. The bulk of the remaining jobs are filled through the Civil Service Commission, not the Post Office itself.

Rates charged by the Post Office except those of parcel post, which are set by the Interstate Commerce Commission, are established by Congress. Expenditures of the department are determined by multiple agencies. Thus, salaries are set by Congress. Funds for buildings are included in appropriations for public works, and "pork barrel" tactics are not unknown here. Contracts with private carriers to carry the mail are negotiated by the Post Office. The amounts paid the railroads for carrying mail are established by the Interstate Commerce Commission. Amounts paid the airlines are set by the Civil Aeronautics Board.

Postal revenues may not be used to pay the cost of services; they are paid

² The budget of the United States government for the fiscal year ending June 30, 1962 (Washington, D. C., 1961), p. 841.

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into the Treasury and funds for financing department activities come from budget requests which result in appropriation bills passed by Congress. Sixty different appropriations are required and every expenditure must be charged against the authorizing appropriation. The General Accounting Office checks the department's books for unauthorized expenditures.

The individual post offices are also closely regulated by governmental regulation contained in the "*Postal Laws & Regulations*," a three-pound book of approximately 1,000 pages. Until the last decade administration of the postal system was highly centralized in Washington in that every one of the more than 37,000 postmasters received his instructions directly from Washington and reported directly to Washington.

Post Office Inefficiencies

IN 1951 when the Post Office was investigated by the Hoover Commission on the Organization of the Executive Branch of the Government, it was pointed up most cogently that the postal department was employing few techniques of modern management. There was no management engineering. There was no research being carried out on the service and desires of the people being served. Little research was in evidence on better methods of handling the mail. There were no standards to measure performance on the job.

In terms of equipment, the picture was the same. Much of the equipment was hopelessly outdated. The average truckage was fifteen years. The Philadelphia office was using horse-drawn vehicles! Sorting of mail was done by hand. Hauling continued in the age-old

sacks instead of modern containers.

THE summary of the independent researchers is a poignant commentary of government operation:

... Deficiencies seem primarily due to lack of incentive and a need for up-to-date policies and modern implements with which to manage.

Because of the control exercised over postal affairs by the Congress, regulatory bodies, the General Accounting Office, the Bureau of the Budget, and the Civil Service Commission, postal officials in the past have tended generally to abdicate responsibility for operating results beyond careful and conscientious adherence to legislation, regulation, and appropriations. They have been expense conscious rather than cost conscious.

Postal officials, unlike business executives, have, as previously stated, only a limited voice in determining the price of their products (postal rates) and in provision of operating funds (appropriations). By business standards they have inadequate accounting and statistical data with which to manage the affairs of the department, and



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are tightly restricted in their control over wages and salaries and other personnel matters. Furthermore, the department is called upon to provide uneconomic services and to absorb hidden subsidies which increase expenses and enlarge deficits.

Aside from responding to constantly recurring investigations of a special nature, postal officials are not required to demonstrate that the department is providing satisfactory service at the lowest practicable cost. No yardsticks exist which are generally applicable for measuring service or efficiency. Postal management thus has no compelling reason to make a true accounting for productivity of man power, facilities, and money; and inefficiency naturally follows. The owners of a progressive business would not long tolerate such a condition.

It can be said, with no reflection on postal officials, that circumstances beyond their control have created a philosophy of management which is sluggish, irresolute, and wasteful, rather than imaginative, decisive, and cost conscious. Furthermore, because certain key positions in the department are regularly filled from time to time with political appointees, there is a lack of continuity of management and little incentive for self-improvement. While it may be shown that over the years postal methods have been improved and costs reduced, it has been an uninspired, low-gear effort which progressive business management would regard as mediocre.³

³ Commission on Organization of the Executive Branch of the Government, Task Force Report on the Post Office (Washington, D. C., Government Printing Office, 1949), pp. 32, 33.

In its report to Congress the Commission on Organization of the Executive Branch of the Government in answering the question, "What Is Wrong with the Post Office?" spelled it out, thus:

a. The administrative structure is obsolete and overcentralized.

b. A maze of outmoded laws, regulations, and traditions freezes progress and stifles proper administration.

c. Although the Post Office is a business-type establishment, it lacks the freedom and flexibility essential to good business operation.

d. Rates have not kept pace with wages and other cost, and rate-making machinery is inadequate.

e. The service is used to hide subsidies.

f. Political appointment of first-, second-, and third-class postmasters and certain other officials produces inefficiency and militates against the incentives of promotion.

g. Accounts are kept by the General Accounting Office outside the department and are available to the Post Office for management purposes only after months of delay. Methods of budgeting and appropriation are entirely unsuited to a business of the size and character of the Post Office. The pressure of these forces in a rapidly growing business accumulates to make impossible the most economical and efficient conduct of the service.⁴

In another study made in 1954, the advisory council of the Senate Post Of-

⁴ Commission on Organization of the Executive Branch of the Government, the Post Office, (Washington, D. C., Government Printing Office, 1949), p. 3.

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UNITED STATES SENATE
Washington, D. C.

February 3, 1958

Professor John D. Garwood
Division of Economics and Business
Fort Hays Kansas State College
Hays, Kansas

Dear Professor Garwood:

I want to acknowledge and thank you for your thoughtful letter of January thirtieth.

I am in substantial agreement with your viewpoint in that I certainly believe that the postal rates for first-class mail should not be increased if in fact this mail is actually "paying its own way"; however, there appears to be considerable merit in urging that second- and third-class rates be adjusted to cover the expense of handling that mail.

In addition, I was very much interested and pleased to learn that my book, *PROFILES IN COURAGE*, was required reading for the honors class which you instructed last semester.

With renewed thanks and every good wish,

Sincerely yours,
(Signed) John F. Kennedy

Post Office Committee noted that employee training was inadequate, supervisor training was not apparent, all coupled with deplorable working conditions and low employee morale.

BEGINNING in 1953 some of the shortcomings were corrected by delegating administrative responsibilities to fifteen regional offices. Money was allocated for research and development. Some of the postal facilities were modernized. Conveyor belts were introduced for mail; letters were separated from packages by ma-

chines as well as being faced and canceled mechanically. Along with this has come stamp vending machines, ball-point pens, red, white, and blue mail trucks, and three-wheel motorized mailsters for postmen.

During recent years the Post Office Department has been conducting further modernization progress to improve delivery of mail and reduce handling charges. A new system of mail transportation and distribution now permits overnight delivery of letter mail in all principal metropolitan areas. Modern mail-

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processing systems with electronic and mechanical equipment are in operation in 17 major postal facilities and 48 more installations are contemplated at the present time.

The Deficit

THE Post Office problem is especially highlighted at the present time because of the constant and growing drain on the public purse. In its first full year of operation in 1790, total revenue amounted to only \$38,000, growing steadily year after year as population increased. In fiscal year 1962 total receipts are estimated at \$3,661,862,000, expenditures at \$4,504,962,000, or a deficit of \$843.1 million. In 1900 the deficit was approximately \$5 million, 1910—\$6 million, 1920—\$17 million, 1930—\$98 million, 1940—\$40 million, 1950—\$546 million, and around \$700 million annually during the decade of the 1950's. Actually the figures are understated because the Post Office accounts include no charge for depreciation of post-office buildings.

The deficit can be eliminated by raising rates but such decision rests with Congress, not the Postmaster General, and Congress is loath to raise rates which may affect so many influential bodies. In 1958 rates were raised but the \$550 million gain in revenues was offset in part by a \$250 million increase in wages.

The structure of postal rates is but little related to carrying different classes of mail. Flat rates are charged for domestic destinations for letters, postcards, air mail, newspapers, magazines, books, and other materials weighing eight ounces or less. Rates are graduated by zones for parcel post. Some mail goes free—that sent by members of Congress and gov-

ernmental agencies, books and records for the blind, and newspapers distributed at post offices in the counties where they are published.

EVERY class of mail handled, except letters, is handled at a loss, and every other service provided by the Post Office, except postal savings, operates at a loss. Letters have been carried at about 100 per cent of cost, magazines at 20 per cent of cost, advertising matter at 50 per cent, and parcel post at 76 per cent of cost. The loss on magazines has been \$250 million annually, that on advertising \$200 million, parcel post \$150 million.

The new rates set up in 1958 were expected to raise the charge on letters to 130 per cent of cost, magazines to 30 per cent, and advertising to 76 per cent of cost. This was presumed to cut the loss on handling magazines to \$200 million annually and on advertising matter to \$100 million annually. Specifically, in 1957 the subsidy for magazines amounted to \$9.5 million for *Life*, \$6.4 million for *The Saturday Evening Post*, and \$4 million for *Reader's Digest*.⁵

Maintenance of 28,000 third- and fourth-class post offices involves a loss of \$50 million annually, rural delivery services cost the taxpayer \$200 million annually.⁶

Conclusion

As a student of economics it does not seem unreasonable to me to expect the users of the postal service to be expected to pay for value received. As a

⁵ *The New York Times*, October 7, 1957.

⁶ "Public Policies toward Business," by Clair Wilcox, Richard D. Irwin, Inc., Homewood, Illinois (1960), pp. 795, 796.

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citizen I object to 1 per cent of my taxes allocated as subsidy to other groups in the economy. (The reasoning is the same for subsidies paid to other groups in the economy.) As a letter writer I object to being charged more than the cost of handling my letters in order that a portion of the letter receipts may be used to defray other costs of the department.

CONGRESSMEN individually may argue that the postal system should be self-sufficient, yet, collectively they fail to follow through.

The copy of the letter which appears on page 591 is a case in point. When Congressmen reach areas of decisive decision making on the postal situa-

tion, they back off — witness the contemplated deficit of \$843 million for the current fiscal year. Were the advice of the letter to be acted upon there would be no deficit. The advice of the research group in the Task Force Report points the way: "In view of rising expenses and the current tax burden, it is to the public interest to correct these conditions at the earliest possible date. The postal establishment should clearly be put in business for itself, and on this basis management should be held strictly accountable by Congress and the President for operating results. Such a move would present difficulties and would require a well-conceived, long-range program of modernization."⁷

⁷ Task Force Report on the Post Office, p. 33.



Read Any Good Meters Lately?

ARTHUR P. BRIGHAM of Hyattsville, Maryland, as conscientious a customer as any utility would want, recently experienced an unnerving contretemps. Seems that Arthur was not home when the reader for the water district came by; so the meter man left the usual card asking the householder to please read his own meter by checking off the card according to instructions. Arthur dutifully complied. Imagine his chagrin, however, when he got a water bill for \$107. Arthur understandably howled and another meter reader was dispatched to his residence. Result was an adjusted bill of much more modest proportions. It appears that Arthur had done exactly as he was told—except for one detail. He had read his gas meter.



Florida Goes 100 Per Cent Dial

On August 31, 1961, Florida became the first southern state and one of the relatively few states as yet to reach the status of 100 per cent dial conversion for its telephone service.

By The Honorable WILBUR C. KING*
Chairman, Florida Railroad and Public
Utilities Commission

AUGUST 31, 1961, was a very significant day for the members of the Florida Railroad and Public Utilities Commission. It was equally as important to the people of the twenty-two telephone companies serving that state. It marked the end of an era in Florida—an era of magnitude and change and one of tremendous progress.

On that day the last manual telephone exchange in Florida was being converted to dial service. In Perry, Florida, we celebrated an attainment that the Florida telephone industry and the members of the state utilities commission had long strived to reach. We are exceedingly proud of this accomplishment, and the farsighted management of all telephone companies that have worked so diligently to bring this day into being is to be commended.

*For additional personal note, see "Pages with the Editors."

The significance of this event is even more notable when we realize that Florida is the first state in the South and the fourth in the United States to have 100 per cent dial-operated telephone service.

THIS is really an impressive accomplishment, particularly when we compare the total number of telephones in the other three states which have complete dial service. Delaware has 200,000 telephones; Rhode Island has 360,000; and Connecticut, 1.3 million. Florida has over 2 million and is among the leaders in spite of growth problems that these other states have never known.

I should like to use this occasion as a point of departure to go back in years and describe some of Florida's telephone history. For it is a fascinating history in that it is one of growth, evolution, and change; a process that is still going on.

FLORIDA GOES 100 PER CENT DIAL

It was in the year 1876 that Alexander Graham Bell invented the telephone. By the end of the same decade a few telephones on direct lines were operating in Pensacola and Jacksonville. In 1880, just four short years after the birth of the telephone, a man by the name of John G. Christopher set out to establish a telephone exchange in Jacksonville. Through his efforts some thirty-four subscribers were obtained and on May 24th of that year, the exchange was opened. It was owned by the Southern Bell Telephone & Telegraph Company and was the first in Florida.

In just a few years other exchanges were established in Pensacola, Tampa, Gainesville, Key West, and many other cities throughout the state. They were small, of course, and many years passed before they began to be connected by long-distance lines.

Growth and Expansion

THIS was the beginning, and from this beginning we have seen the industry grow and expand with the state. The year 1900 saw some 18 telephone companies operating in Florida with a total of 6,285 telephones. The old magneto, or hand-crank telephone, was the thing of the day. By 1920 there were 71 companies in Florida with approximately 60,000 telephones.

Toll lines began to stretch across the state in this period also. It was in the year 1913 that toll lines first stretched down the state from Jacksonville to Miami and on to Key West in 1916. A big change in progress was the introduction of the common battery system to replace the earlier magneto telephones.

An amazing evolution took place in

the industry during this period also, and that was the introduction of dial telephone service. From available records it appears that the first dial central office was installed in Florida in Tampa in 1913. It was installed by the old Peninsular Telephone Company, now a part of the General Telephone System.

STATE regulation came into the picture in 1911. The legislative session of that year authorized the railroad and public utilities commission to assume from municipal governments regulatory powers over the telephone industry in Florida. This was the beginning of statewide uniformity in regulation and one of the biggest by-products of this uniformity was the elimination of two separate companies serving the same area. This resulted in operating economies and subsequent savings to subscribers.

While the number of telephones in Florida continued to expand over the years, the inflationary period of the 1920's and the depression years of the thirties brought a big change in the industry. The many individual companies operating in single cities began to merge and consolidate into multiexchange systems. Thus the business became one of larger companies operating in many towns. The greater financial strength gained by the remaining companies enabled them to attract the capital necessary to expand with the state and modernize as new telephone developments were brought out.

By 1940 there were a quarter of a million telephones throughout Florida.

Following World War II, Florida entered a period of enormous growth and it is in this period that the telephone industry in Florida has seen its biggest

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expansion, evolution, and yes—its biggest problems.

Continued Improvements

THE industry has been hard put to keep up with the growth in this period and at the same time continue to improve the quality of service through the continued introduction of dial telephones. Tremendous amounts of capital have been required. The job was done, however, and done well. So well, in fact, that with the changeover in Perry, Florida is now one of the leading states in telephone progress.

This goal has been reached through the co-operation and team efforts of all our telephone companies working together. The co-operation that exists in the industry has brought us a communications industry that is unique in the annals of business. Many companies working together, toward a common goal, sharing the problems and the rewards. Truly, this is a marvel of our American way of life.

A milestone of growth was reached in 1960. Just a year ago the Florida telephone industry, comprised of 21 inde-

pendent companies and the Bell system, installed its two millionth telephone in Florida.

The Gulf Telephone Company, which operates in Perry, is typical of many of the fine independent companies in the state. It is a father-and-son combination and serves over 2,300 telephones in this center of Florida's timber industry. Founded in 1902, it was purchased by Ernest L. Cox in 1915. Mr. Cox celebrated fifty years of service in the telephone industry on May 1st of this year.

THE telephone industry has played a vital rôle in the prosperity of that wonderful state. It has provided stable employment for thousands of Florida citizens and this employment will increase in the years to come. Over \$800 million have been invested in the state by the industry. This huge investment in buildings, plant, and other facilities has provided employment for many more thousands in the construction and associated industries. Indicative of this is the combined construction program for the industry in 1961. These telephone companies are spending some \$93 million this year to provide for more and better telephone service.

The telephone industry is one of our largest taxpayers and these tax revenues have contributed greatly to the economic well-being of our local, county, and state governments.

The ability of the telephone companies to provide all types of telephone service, at reasonable rates, has been a major factor in enticing new industries to move to Florida. These many new industries have all added to the prosperity and growth of Florida, and without the finest



FLORIDA GOES 100 PER CENT DIAL

of communications service that is available to them here, I am certain that many would have located elsewhere.

Reasonable Rates

IT is most important to mention that the thousands of retired people who have moved to Florida to enjoy our wonderful climate would not have moved here unless they were assured the communications and telephone services were excellent so that they can keep in touch with those back home who are now working hard to save enough money to retire in Florida.

I mentioned the reasonableness of telephone rates in Florida, and it is my firm conviction that they are reasonable, more so, in fact, than in most other states. This, I feel, is particularly true when we visualize the value of modern, up-to-date telephone service. It is an integral part of American business and social life, and without modern telephone service our economy would slow to a crawl.

Over the years the quality of telephone service has consistently improved as has its value. It is worth far more today than it was in the past, and yet the cost, in general, has increased less than any other product or service you can buy today. Its value will continue to improve with the many advances that are coming in the future. As already noted, the history of the telephone industry has been one of change and its future will be one of change. For even better telephone service will be needed to meet the ever-growing and changing demands of our modern way of life.

The Florida commission has a tremendous challenge before it and that is to give the industry the fair and proper regulation necessary to aid in meeting

these growing demands of the future. We know that the industry must compete in the open market for capital. We know it will take fantastic sums of money and, in order to acquire this money, the industry must be allowed to earn a fair rate of return for its huge investment.

The financial center of our country in New York serves as a sensitive barometer to the people who invest their money and we know that it is here that the industry must get its money. Fair and just regulation, allowing a fair rate of return, will enable the Florida telephone industry to compete in this market for money. The commission will do everything possible to aid in this competition.

Future Is Bright

THE future of the telephone industry in Florida is one of continued promise. The many technological developments that have come about since the end of World War II have brought tremendous progress in the industry. The telephone industry today is a far cry from what it was just twenty years ago and it will be even more so a few short years in the future. One might say this is the "jet age" of the industry, for research has certainly moved the industry forward with the speed of a jet.

Such things as the development of microwave transmission and the coaxial cable have broadened the horizons of world-wide telephone communication immeasurably. And, in so doing, have enabled the growth to prominence of our national television industry. Telephone research has paid off with the transistor, and other improved electronics equipment. In fact, an electronic central office is now in operation in the United States.

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We have noted that the quality of telephone service and its value have improved. This has been brought about by research and this research has given the United States the finest telephone system in the world. This is a good example of what free enterprise can do, and American free enterprise, through research, is on the threshold of world-wide telephone communication through the development of space satellites.

THE solar battery, developed by telephone research, through its ability to convert sunlight into energy will play an important part in space communications.

The American Telephone and Telegraph Company has signed an agreement with the National Aeronautics and Space Administration to launch experimental space satellites during the first quarter of next year. These experiments will provide developmental information that will assure the success of communications in space in the very near future.

The Federal Communications Commission has made a public announcement to the effect that the service of communications in space should be carried out by free enterprise—that the know-how and capabilities of American business will insure the success of our space communications program.

Space Communications

IT is proposed that all communications carriers, such as the American Telephone and Telegraph Company, International Telephone & Telegraph Corporation, and others, will jointly provide space communications with the commer-

cial carriers of all countries in the world. We as regulatory people strongly endorse the position taken by the Federal Communications Commission. This is a field where free enterprise excels and we are sure that America will be first in communications in space.

I would like to point out also that telephone research and the industry itself play a vital part in the defense of our country. The SAGE system of air defense warning networks utilizes telephone lines leased from commercial carriers. Telephone research developed the command guidance system of our "Titan" intercontinental ballistic missile, as well as that of the "Nike" family of defense missiles. We can honestly say that telephone research plays a major part in the defense of our way of life.

Today we in Florida dial all our local calls; tomorrow we shall dial all our long-distance calls; and the day after, perhaps we shall dial the moon.

This is a direct result of a well-informed telephone industry. It is a proper example of free enterprise in action and, on behalf of my fellow commissioners, Mr. Mason and Mr. Carter, I want to extend to the Florida telephone industry our wholehearted congratulations for a job well done and promise our continued co-operation in the future.

IN conclusion, in paying proper tribute to this great event of progress in communications, we should not be unmindful to pause and give thanks to our Heavenly Father for giving us the materials and mankind's ingenuity to put together this accomplishment.

For 1976, a Pageant of the Telephone Woman



By JAMES H. COLLINS*

The telephone operator has gone through a number of transitions through the years—the Gibson girl of the early century, the "weaver of speech" of the thirties, the heroine of many an exciting story, both fiction and nonfiction, in more recent times. Is she now passing from the picture entirely?

WHEN the Emperor of Brazil, Dom Pedro, exclaimed "My God, it speaks!" and nearly dropped the first telephone receiver in his astonishment, at the centennial in 1876, he unwittingly uttered the "Open sesame!" to a new world for women.

The time approaches for a second centennial. What the telephone has done for women, what women have contributed to telephone service, might well be considered as the theme of a pageant for that anniversary. It has relations angles that can be utilized meanwhile, locally, and on a modest scale, by individual telephone companies.

What the telephone woman was yesterday, what she has become today, the opportunities she has found in telephone

jobs, might be better understood by the public. For a practical angle, better acquaintance with her work could facilitate recruiting, which has been a problem from the earliest days.

IN that centennial year, a woman's field of employment was very limited. She could teach school. She could become a nurse. She could become a "companion," or do "fancy work" to offer for sale at a "woman's exchange." At the lower levels of ability she could get a factory job, or become a hired girl. There were, as yet, no places for her in business, except perhaps behind a retail counter. The 22 million women working today will be astounded at the poverty of employment open then to the girl who says today, "Well, I think I'll go out and land me a job."

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THE women of that era were restless. It is said that revolutions never start with the downtrodden victims of injustice, but that better-off individuals, often aristocrats, trigger off explosions to better the condition of the masses. In this case the ringleaders were women like Amelia (nee Jenks) Bloomer, who designed and wore trousers still named after her in the dictionary, and Doctor Mary Walker, who put up the hard fight for her medical degree. Some of the agitators smoked cigars, and experimented with the sexual license of the male. The vast sisterhood of women was as indifferent as the Russian peasantry during the days of the Nihilists. This revolution would burst into flame among their granddaughters, the suffragettes, who chained themselves to area railings. "Votes for women" was only a minor factor then. The demand was for liberalization of marriage and property laws.

"They want to wear the pants," said men.

With the clarity of hindsight, we now see that, while they really did not know what they wanted, it was opportunity to apply their feminine abilities to better jobs. Psychologists have made many studies to determine in what respects men and women differ in abilities, arriving at no very definite conclusions. As good an answer as any is to look into the world or work of today and see what kinds of work women are doing that is fitted for no others. The telephone industry is an especially good place to look.

A New Drugstore Corner

TELEPHONY started out as another masculine field, like railroading, tele-

graphy, and postal service. Teen-age boys were hired to make connections at the first switchboards, when subscribers numbered only a few hundreds, and were called by name, not number.¹

An early picture of a switchboard tended by boys is a vertical affair running from floor level to as high as a boy can reach, the boys on their feet all day, reaching around each other to insert plugs, the essence of inconvenience, a sort of Dotheboys Hall, with a man supervisor watching them from a table. The boys' voices were changing to a croak. They were pert, and forgot errands left with them by subscribers; when the traffic peak rose, would become insulting. They were noseys, too. This new telephone exchange was another drugstore corner, where bits and pieces of gossip could be picked up and fitted together.

"Jim, who was that lady with Mr. Smith the other night?"

"Not his wife, anyway."

"What? My Daughter Work!"

ECONOMIC advances in this country are usually sparked by inventions—the cotton gin, the reaper, the sewing machine, the Tin Lizzie. And it was two inventions that were to open the way for women into the business world. Bell with the telephone, and Christopher Sholes with his typewriter, which was always breaking down until the Remington arms people, with their Civil War experience in precision parts, made the first practical writing machine, and women, armed with shorthand, infiltrated into offices, with carbon copies. In those days letters were

¹"Queen for a Day," by Gilbert R. Brackett, *Telephony*, July 15, 1961, an interesting survey of early telephone days.

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written in longhand, and copied into tissue paper books between damp blotters, by office boys.

"Let's try girls at this switchboard job," said telephone managers, and the first business employment that required no special training was opened up to women, and, as it eventually turned out, to millions of them.

It was not easy recruiting the first telephone girls. There were no employment agencies for office help other than accountants and copyists. The only female workers listed were servants, child minders. A sign hung out, "Young Women Wanted," brought in a few scouting factory girls, who were obviously not the type.

"What we need for this work are nice home girls," agreed the managers, and finally went around to homes seeking to interest that kind.

Mr. Smith was flat-footed about having his daughter work. "In the telephone exchange!" he blurted. "With those fresh boys?" He had had arguments, and while not wrong numbers, yet, had been connected with people who were in bed, and knew his voice.

"Telephone work for Mildred?" said her mother. "Why, she's just out, and it would spoil her marriage prospects."

SOME of the factory girls tried the work and found it more interesting than pasting labels on cigar boxes, hobnobbing with the best families. The shift from boys to girls, with a matron to supervise and a chair to sit in, was a marked change for the better in service. The girls were soft-spoken, tactful, remembered messages entrusted to them, got to know sub-

scribers by voices, and made the switchboard a social center.

From the first, fire had been a hazard in telephone equipment, not so much in itself as in the damage water would do to insulation. So fire officials were asked to come around and inspect the exchange as premises they might have to deal with on an alarm. They saw the tarpaulins kept to protect equipment, and also saw the kind of work young ladies did at the switchboard. "This would be nice work for my daughter, my sister," they said. Parents were invited to the exchange, and recruiting became easier as the nature of the work was understood.

How the telephone girl became an "operator" is a story in itself. For a while she was "Central," in other lands became a demoiselle, seniorita, fraulein, or simply "Mees." The early telephone plant drew heavily on telegraphers, who among the mechanics of that day were the only ones who understood wiring. Theodore Vail, who became president of the Ameri-



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can Telephone and Telegraph Company, was a telegrapher and Western Union man, and his cousin had helped finance Samuel F. B. Morse. Telegraph key pounders were called operators, and so the telephone girl became one, and ever since, with all the changes in service, has remained one, though she may have graduated from the switchboard.

The Prototype Telephone Woman

AT first there was no standard telephone vocabulary, with phrases like "Number, please?" and "Thank you." As traffic increased, and exchanges expanded, it was necessary to develop such a vocabulary for brevity, as well as protection. Callers tried to enter into conversation with operators, and heard only "Number, please" reiterated, and got the idea of impersonality. Occasionally an operator had a bad experience with a heckler, or pervert, something dreaded by supervisors, because it could upset a good operator for days. Eventually this standard vocabulary was turned over to discs. "The number you have tried to reach has been discontinued." Who has not been lured into an argument with a record!

For a pageant of telephone women there will have to be a prototype, and reconstructing her from old photographs, either for a national celebration or a local or regional show, should be an intriguing piece of historic research. The clues will be clothes, hairdos, and the like, from the three little maids from school, to bobs, permanents, and hobble skirts, and she should be a character as curious to the present-day telephone woman as would the latter have been to her, had she been able to look in the crystal ball of the future.

ONE basic invention was still lacking in those early years. The prototype operator has no legs. Her "limbs" were draped in numerous petticoats, down to her heels, and she perhaps knitted her stockings. Before legs could be put in the window by the business girl, the DuPonts would have to invent rayon and nylon.

It has been suggested that her operating, with its asking for numbers, was a pretty dull routine. Contrary to popular ideas, she heard nothing of subscribers' conversation after plugging in. An assembly line job, like fitting Nut 247 to Bolt 83. True, perhaps, as long as traffic was limited to the city. But one of Theodore Vail's objectives was linking the cities together in the Bell system. Bell telephone companies had originally grown in the cities, where there were the greatest number of potential subscribers, and the towns were left to the independent companies. Such toll leaps as that from New York city to Chicago were notable advances, the first conversation being held by Alexander Graham Bell himself.

The operator came closer to the subscriber when outlying traffic developed, locating those they wanted to talk to, entering into their problems, also timing calls, writing tickets, and widening her work area. The beginnings of change in her job, the first glimmers of "Information, please," which subsequently became such a prominent feature.

Flexibility of Telephone Jobs

WHATEVER she may have thought of her routine, engineers and management had their eyes on it. Dull or not, it was expensive. Various schemes were pondered to bring telephones to more subscribers, cutting costs. One was the

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setting up of small exchanges in a city block, where the connections could be made by a single operator. The ultimate solution, of course, was to draft the subscribers to do the work of making connections—the dial system, that began as a local proposition, and is now spreading over the nation, and tomorrow will be international.

"Why lengthen switchboards by the mile, and hire more operators by the hundred, when the subscribers have all this time on their hands?" reasoned the engineers. "Pay them for their work in faster service." It was a deal, and subscribers have liked it more and more as it has been extended.

In these later times when mechanism is supplanting jobs on every hand—what became of the operators?

THAT settled itself in ways that showed the peculiar flexibility of the telephone employment system. During the hectic 1920's, after the first World War, when everybody had a line of stocks that he or she expected to live on in a new era, there was growth, and some difficulty in hiring

people who did not have to work. Then came the depression, when growth was retarded, and reduction of new hirings adjusted the work force to the needs. Followed the depression years, and the shortages of the war, and finally the fantastic backlog growth of the first postwar decade.

The Hard Core of the Service

IF vital statistics had been kept on the millions of operators who all these years have staffed the switchboards, some interesting curves would undoubtedly have been developed.

For example, at what age have most girls entered telephone service? As early as eighteen? How long did they stay—five years? Did they then marry, with their savings to help finance a home? Or did some of them remain in telephone service, rising to other jobs?

All those years the telephone industry, as far as operators were concerned, appears to have been staffed from school. The telephone service, with its discipline, was important, but marriage was paramount. Mostly a minority of operators

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settled on the industry for permanent careers.

What did the girl who quit after a few years get out of it—simply her wages?

First of all, she became a company-trained, disciplined operator. Active but off duty, or retired, she became part of an operating reserve, ready to respond to emergencies.

For example, one of H. G. Wells' science stories described the landing of Martians in England. This was picked up for a radio show, by the actor Orson Welles, using the original news bulletins, but transferring the imaginary invasion to New Jersey. As "The Men from Mars" it was taken for real news, and scared thousands of listeners in New Jersey.

THE reserve operator in such a situation knows that switchboards will blaze with lights, among which are perhaps a dozen calls for ambulances, fire engines, and police. She hurries to the nearest exchange and goes to work, as she has been trained, answering calls with "Please hang up, it is only a play."

Emergencies like the Wall Street bomb, the Black Tom sabotage explosion in the depth of night, automatically rally these reserves, a hard core of experienced telephone people, ready to quiet popular alarm. The company-trained operator becomes resourceful in meeting minor emergencies. A receiver left off the cradle, a child's voice, a sudden sickness or accident, any irregularity indicating trouble in a home, she knows not what, sets her investigating, calling help, calling neighbors. Operators standing by to face disaster are reported regularly in the news, and the Vail medals were established in recognition of such service.

AN operator may have a gift for remembering voices, comparable to a photographic memory, and in traffic forms a wide acquaintance with callers whom she will identify after weeks or months in which they are not heard. Accents, localisms, peculiarity of speech—meeting any of them in person, she would not recognize them until they spoke.

"How do you happen to remember me?" asks a surprised broker. "I've only called your company once in several months."

"Oh, I couldn't mistake your voice—you talked with our Mr. Blair."

"That's the kind of girl we need on our switchboard," decides the broker.

On the morning of a sudden market break she hears a gruff, familiar voice. It is one of the broker's largest operators. He has been on a hunting trip, far from telephones.

"Why, Mr. Lukas, how did you hear about the market?"

"That damned guide had a portable radio!"

"Here's Charlie Cassatt, sir," and switches him in. Charlie and his wife have been having a heated discussion, which she does not hesitate to interrupt. Later, she will smooth down his wife.

A GIRL with company training may develop an interest in secretarial work and qualify by attaining shorthand and other capabilities, such as familiarity with a particular industry, pharmacy, or a profession, law. She may have become an assistant supervisor, and be hired by a hotel, a bank, a travel agency. Company training fits her for promotion in the telephone industry, and is the door to the general business world. Come what may,

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she will always have this basic training.

"Wonderful—But Where Is Everybody?"

THE present-day telephone woman is still a "Number, please?" operator, but with what differences! Direct local dialing took her a thousand miles from the exchange switchboard, and local numbers. She sits at an advanced type of direct distance dialing board, alone or with two or three other operators, with a few cords and keys and a bulletin of routes and rates for frequently called toll connections. She makes quick decisions as to routes, answers questions about rates, and operates a key pulsing set, a push-button dial affair, that makes connections over a vast network reaching a few trunk groups. The physical work is much lighter than was required at a local board, and she is a specialist in a particular area of direct toll dialing and all-number calling, which are fast being installed, and raising entirely original subscriber problems. She is also a customer relations asset and management values her for her pleasant handling of difficult situations.

Direct dialing in its various forms is wonderful for the subscriber, and the telephone company, when the former learns the numbers of people he wants to reach with toll calls. "DDD is wonderful," admits the customer, "but where is everybody?" Not one toll call in a dozen is dialed to a number, and the customer has to have quick information about strange people in strange business concerns.

A NEW YORK subscriber asks for a connection with a concern in Pittsburgh, as was common before direct dis-

tance dialing. The operator gives him a number and tells him he can dial it himself. Or she gives him the number of a Pittsburgh information operator, who will have it.

A Chicago subscriber calls a business concern in New Orleans to place an order, or make a sale. He has only the name of an individual there; the operator gives him a number and a rate. He is out, will be back that afternoon. She asks the Chicago party if he prefers to call later, or have his name and number left in New Orleans. "Ask him to call me and reverse the charge," the subscriber directs. From the company standpoint, a toll call is saved.

SUCH a specialist will have charge of coin-box equipment. Callers want rates, reach a wrong number after putting in money, the operator offers to return the money, or call the desired number for him.

Toll calls can run into equipment trouble.

In contrast to the operator who routes



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toll traffic over main thoroughfares, there is the specialist who handles calls over little-traveled routes.

Many of these specialists are qualified to handle different kinds of direct dialing traffic, and are assigned to different work as traffic increases.

There Must Always Be Dial Tone

IN 1958, Bell system business offices received nearly a million telephone calls and personal visits from customers every working day. In fifteen years such calls have nearly tripled, and continue to multiply. They then averaged about three calls per customer yearly. It is estimated that each call costs a telephone company 4½ cents to answer, and involves a constantly increasing area of information.

Customers want to know about direct dialing, automatic toll call accounting, various types of sets, such as answering, speaker and amplifying and color sets, and new equipment developed mostly since war's end, with which the public is getting acquainted—a vast educational task. Each of these calls is regarded as a customer relations opportunity. Questions are answered promptly and pleasantly, promoting the company image. It is also regarded as an opportunity to sell more complete equipment for the home, and for business. Finally, what a customer has to say about service, for or against, often leads to unsuspected annoyances that can be eliminated.

On manual switchboards quality of service depended upon having an operator to answer all calls. With customer dialing, this promptitude depends on dial tone. It must be constant for the subscriber dialing himself, and also for operators assisting with calls. Supervisors, chief op-

erators, engineers, plant and traffic men, even accounting and marketing people, are charged with watching dial tone, for present and future requirements. This is part of future planning.

Handling the Slow-pay Customer

ANOTHER area in which women are efficient is bill collecting, with the emphasis on slow-pay subscribers. This is a field in which records are important. Bell has a philosophy of slow pays—that no standard procedure can be used with them, as each delays paying the telephone bill for different reasons, mostly personal. To facilitate collecting, the dilatory customer's credit record, size of past bills, promptitude in paying, and perhaps ability to pay, must be taken into account. Such records in files are bulky, and it is planned to turn them into machines, which will in turn bring them to the collecting desk in other machines. Some of this is still futuristic, but with computers progressing at their present pace, it is expected that it can be done.

"If machines to bring records to the collector's desk," it might be asked, "then why not a machine to talk to the slow-pay customer?"

"Not desirable if possible," reply the mechanizers, "for then we would miss the opportunity to make a good impression on the customer."

HOWEVER, machines prepare and mail bills to customers, and pinpoint slow pays that should receive personal attention. Bell system billing now exceeds \$7 billion yearly, up in fifteen years from \$122 a year to nearly \$200. Slow-pay customers are a comparatively small percentage, but collecting from them is ex-

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pensive. A glance at the slow-pay subscriber's payment record may show that he has always been prompt until now, and that his bill this month is unusually large. Resentment at toll charges for which he is not responsible may be his reason for delaying payment. Often it is found that errors have been made in toll charges, which should have been billed to another customer. Courtesy calls before temporarily cutting off service are often effective. Nobody is going to get along without telephone service in pique.

With credit and personal information about the dilatory customer at her desk, as she picks up the phone to talk with him, the collection employee is able to understand his position better than he does himself. About 85 per cent of such data, heretofore kept in voluminous office files, is being transferred to machines.

The Versatile PBX Adviser

No pageant of telephone women is going to be representative or complete without two characters, the PBX girl and the PBX adviser.

When did the first extension phone appear? Perhaps the collector of old instruments can say. For long, the single brown box hung on the wall, its ringing current generated by a crank, and when it rang it was answered by whoever happened to be near it.

The first extension was acoustic, not electric.

"You want Joe? He's down in the stock room, I'll call him. Hey, Joe, telephone!"

PRESENTLY Joe had something in the stock room that would ring him, and into which he could talk, and when the office had several such extensions, a small box, dignified as a "private branch exchange," was installed, and a young miss hired to tend it—the PBX girl. She was not a telephone employee, but in a little while showed such capacities for affecting, for good or otherwise, what is now called the quality of service.

She could ring wrong numbers, forget messages, gossip, and if she developed

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some proficiency, could quit to marry. Or she could be fired. In the process of developing a standard impersonal service, she was a maverick.

So, the telephone company adopted her as a sort of ward, and that she has remained ever since. At first she was given some instruction in operating at her board, and invited to attend a company school, and this arrangement has obtained today with the PBX adviser in charge.

THE PBX adviser is quite a finished telephone woman. Starting in as an operator, and choosing to stay in the service, she advanced to assistant supervisor, supervisor, chief operator, the handling of complaints, and various jobs in co-operation with engineering, plant, and traffic departments, during which she learned much about equipment, general business, and other things that make her valuable to PBX customers.

For example, she is an efficiency expert, in the sense of showing people how to run their business.

Also, a psychologist and diplomat. Many PBX operators bristle at the idea of anybody from the telephone company showing them how to work their boards. They landed their jobs with their employers, and feel a proprietary status.

By way of introduction the PBX adviser may check up their switchboard traffic, to determine whether the peak load is too much for them, and also to see if facilities are adequate for the business; if orders are being missed because the board is too busy. She also inspects equipment, spotting frayed cords, sticky plugs, dim lights.

On the average, a PBX adviser serves a thousand boards, some of them

larger than the telephone company's smaller exchanges, and with employees outnumbering the latter's personnel. However, many of these boards are small, tended by two or three girls. She visits smaller boards once or twice a year, but keeps a constant supervision on the large ones, where company maintenance is kept up. Also, she sometimes acts in hiring girls, and sometimes installing new boards, fully staffed.

Her work takes her around among all sorts of industries, making her familiar with manufacturing and distribution, and she acts as a sales representative for toll service, advising the use of such devices as collect calls on orders.

In a word, she is a smart cookie.

PBX on the Way Out?

As part of the general trend toward direct dialing in its various forms, some of the largest PBX installations are being improved out of existence, through conversion to inward and outward dialing. This is for cost cutting to the PBX subscriber, and the speeding up of communications.

The most notable conversion of this kind was that of the hotel PBX to outward dialing for guests, guests dialing to one another in the house, and inward dialing for outside callers. Also, the congressional and department boards in Washington, where government agencies, all practically in the same business, are being given direct access to each other without passing through a PBX board.

As an illustration, New York Telephone engineers have under way an inward dialing study of Consolidated Edison's traffic, and find that 93 per cent can be built up to that basis, as a start toward

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a fully flexible and automatic telephone system. Cost reductions to the utility company are diversified.

Switchboard positions under the present system would be reduced from thirty to four, and only six operators would be needed instead of sixty-five.

Through a switchboard, busy and no answer calls are charged to Edison.

Night, Sunday, and holiday calls will go through without special arrangements, and toll calls to outside parties whose direct dialing numbers are used, will be charged at station-to-station rates.

It is expected that there will be fewer calls to the switchboard about customer and other problems: "Our electricity is off—whom do I talk to about it?" or "There's a gas leak in our kitchen—whom do I report to?"

This touches the major problem of the telephone industry—information. Direct dialing is turning over to the public the most comprehensive communications machine ever devised, and it is constantly being improved. But a direct dialing call often creates demand for information, and this demand is growing with extensions of direct toll and all-number calls. "Information" is costing the Bell system alone \$100 million a year, and no company is too small to escape this expense. It is said that between two and three direct dialing calls wind up at the information desks.

Various solutions of the information problem are being tried. Basically, the public must be educated in the value of keeping its own lists of often-called numbers, and, for this purpose, telephone companies distribute little blank books and other aids. The public has the bad

habit of asking Information for telephone numbers, when it might have them listed.

Information also touches the problem of the directories. As general directories have been split up into regional sections, so special directories may be issued by utility companies, government departments, and other concerns converting large PBX boards to direct dialing.

Introduce Her to Other Women

WHILE our second centennial is still more than a dozen years ahead, it is not too early to begin thinking about it. Our first one celebrated chiefly our political revolution. This coming one will mark several revolutions, industrial, technological, educational, economic—and the one that opened the doors of opportunity to the 22 million American women now working outside of farms and households.

Among them are 2.5 million technical and professional workers, 1.1 million managers and proprietors, 1,750,000 in sales work, and 6.8 million classed as clerical. In these categories are to be found at least 1.5 million telephone women, in Bell and independent companies, and accessory industries.



PUBLIC UTILITIES FORTNIGHTLY

It is interesting to remember that practically none of these occupations were open to women, and not so many of them to men. Our educational system did not prepare even men for such work, and actually excluded women from it.

What the telephone industry will do to celebrate this revolution is still to be determined. It is quite likely that the women themselves will stage a pageant. For women are, in a way, a party, and enterprising in marking their party gains.

It is not too early to introduce the telephone woman to the public. Regularly, in employee magazines appear articles about the various kinds of work and problems handled by telephone women, some written by themselves, others by special writers, and interesting to other people in the industry. Such articles could be given a general reader slant, for women's pages, and be news to women gen-

erally, as well as valuable from the standpoint of recruiting.

THE three little maids from the ladies' seminary are not only still sought, but rated first in hiring. Friends recommended by present and past employees are important sources of capable recruits, because telephone women themselves know what it takes. But the personnel manager's eye is always on the schools. The flexibility of telephone employment is such that he can put a student on part time, to earn money toward her tuition. By keeping in touch with school authorities, he is told when her school work lags—and back to school the little maid goes until her marks are satisfactory.

A women's page audience might find it interesting to read about how the three little maids from school became a cornerstone of the telephone business!



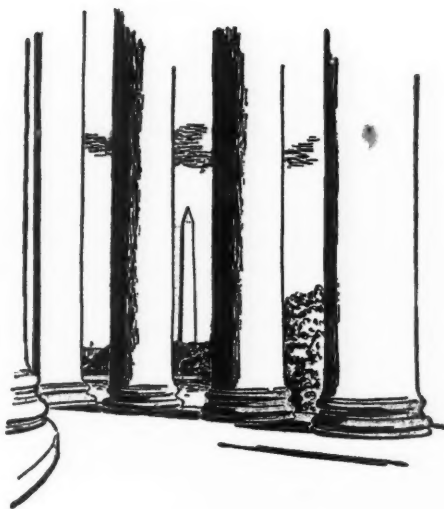
WHO'S "big boy" on the Big Board? Superior Oil, according to the trading floor slang of the New York Stock Exchange. The nickname is based on the stock's price, about \$970 a share, the highest on the exchange.

The exchange's monthly magazine recently explained the popular names—reverent and irreverent—that brokers have coined for various issues.

"Bug" for Brooklyn Union Gas is an acronym—a word formed from the initial letters of each word in a group. Another type of derivation is "Marilyn Monroe" for Welbilt Corporation.

Other nicknames stem from the stocks' ticker symbols, such as "Ukelele" from Union Carbide's UK, "Fuzzy Wuzzy" from Fairbanks Whitney's FW, "Glo-Worm" from Corning Glass Works' GW, and "Wet Mary" from Western Maryland Railroad's WM.

Washington and the Utilities



New Anticrime Law and the Telephone

THE telephone industry is both involved and interested in three bills recently signed into law by President Kennedy. The new laws give federal, state, and local police powerful new weapons to crack down on the use of telephone, telegraph, and cable services to transmit across state lines any information useful to gamblers and other underworld figures.

Prohibited by the law will be the use of these communications facilities to foster illegal activities ranging from the numbers game to narcotics traffic. All three laws were requested by Attorney General Kennedy, and are part of his seven-item package of antiracketeer legislation.

Besides the law which makes it illegal to use a "wire communication facility" to transmit across state lines any information useful to gamblers, the bills signed by the President make it a federal crime to: (1) Cross state lines or use the mail to conduct or distribute the proceeds of gambling, prostitution, narcotics, or illegal liquor sales. This measure was aimed at absentee racketeers who operate beyond the jurisdiction of state authorities at the

scene. Violators could be sentenced to five years in jail and a \$10,000 fine. (2) Carry or send across state lines records, tickets, slips, and other writings used or intended for use in bookmaking, the numbers racket, or sports wagering pools. The law exempts betting slips sent to Nevada, the only state where gambling is legal, and parimutuel tickets at race tracks where they are legal.

COMMON communications carriers under the jurisdiction of the Federal Communications Commission must withdraw service from those subscribers known to be using the communications facilities for gambling purposes. Hearings before Senator John L. McClellan's (Democrat, Arkansas) permanent Senate Rackets Committee showed that bookies could not operate as widely as they do without fast, accurate race results. Witnesses before the committee said that race wire operators sometimes hired people to filch such information from the track by using electronic gadgets. The new law exempts the carriers from damage suits brought by subscribers for withdrawing service on the request of federal, state, or

PUBLIC UTILITIES FORTNIGHTLY

local law enforcement authorities.

The White House said that the three measures represented "the most sweeping legislation enacted in the crime field since 1934."

The President also signed into law a bill (S 1990) which makes it a federal crime to destroy or tamper with the nation's communications systems. The measure provides for a jail term of up to ten years, a \$10,000 fine, or both for the destruction or interference with any "radio, telegraph, telephone, or cable, line, station, or system, or other means of communication, operated or controlled by the United States, or used or intended to be used for military or civil defense functions of the United States, whether constructed or in process of construction. . . ."

The legislation stems from the dynamiting earlier this year of telephone company relay station towers in Nevada and Utah by two self-styled revolutionaries. The two men were caught, but there was a question whether existing federal laws covered the offense.

Congress Hits Phone Monitoring in Government

THE House Government Operations Committee has called for an end of telephone monitoring in federal agencies after a study showed that 33 of 37 governmental groups permit some kind of telephone monitoring.

The committee, while not specifically condemning all monitoring of phone calls, called for an end to "eavesdropping" methods and a ban on use of recording devices without advance notice.

Of the 37 agencies contacted, only the Post Office Department, Railroad Retirement Board, Selective Service System, and Tariff Commission prohibited any

form of phone monitoring, the committee study showed.

In its report to the House, the committee said:

When monitoring is done secretly and becomes eavesdropping, the bureaucracy is sacrificing principle to the altar of efficiency. No matter what the excuse, there is something mean and unprincipled in a government official's arranging for a secretary or a transcribing machine to eavesdrop on telephone calls. . . .

THE committee, admitting that the preliminary survey was an incomplete one, said that a more searching comprehensive study should be undertaken. The initial report was under the direction of Representative John E. Moss (Democrat, California).

On the basis of replies to queries from Representative Moss, the committee found that of 37 agencies, 33 permitted telephone monitoring; 21 had no regulations controlling telephone monitoring; and 17 did not require the other party to be warned that a call was being monitored.

The committee's recommendation is as follows:

If efficiency is a valid excuse for telephone monitoring, the practice should be permitted in government agencies only under clear, written guide lines. Those guide lines should not permit unannounced telephone eavesdropping, either by a secretary or by recording equipment. When this is done, it is unlikely that the government will have to run up a monthly telephone bill for secret snooping devices to permit telephone eavesdropping.

Some agencies, including the Selective Service System which replied it permitted no telephone monitoring, reported that

WASHINGTON AND THE UTILITIES

they occasionally used transmitter cutoff switches which can provide a special listening-in circuit, the committee report explained. There has been no comprehensive survey of these devices which can be installed at an extra charge of 25 cents per month.

AGENCIES listed as permitting some form of telephone monitoring were the Agriculture Department, Atomic Energy Commission, Civil Aeronautics Board, Civil Service Commission, Commerce Department, Defense Department, Development Loan Fund, District government, Federal Aviation Agency, and Federal Communications Commission.

Also, Federal Deposit Insurance Corporation, Federal Home Loan Bank Board, Federal Mediation and Conciliation Service, Federal Power Commission, Federal Reserve System, Federal Trade Commission, General Services Administration, HEW Department, Housing and Home Finance Agency, Interior Department, Interstate Commerce Commission, Justice Department, and Labor Department.

Also, National Aeronautics and Space Administration, National Labor Relations Board, National Science Foundation, Securities and Exchange Commission, Small Business Administration, State Department, Subversive Activities Control Board, Treasury Department, United States Information Agency, and Veterans Administration.

Hurricane Disaster Area Offered Saline Plant Water

THE government, following the devastation of Hurricane Carla in the Texas-Louisiana region, offered the disaster area a saline water conversion plant

which would make available 15,000 gallons of fresh water daily. The move was made by Secretary of the Interior Udall after reports that fresh water was on sale in the Freeport, Texas, area for as much as \$2.50 per gallon, because of the disruption and flooding of water mains and reservoirs in the region. A gallon of distilled water normally sells for 15 to 20 cents.

Udall said that the fresh water producing plant could be shipped by trailer from Denver, Colorado, to the areas with a water shortage. The plant employs an electrodialysis process and could supply the daily needs of about 15,000 persons. The Denver plant process has been under test at the U. S. Bureau of Reclamation laboratories. The unit could have been mounted on a trailer and be ready for shipment to Texas within forty-eight hours, Udall said.

THE government's saline conversion plant at Freeport, Texas, was put *hors de combat* by the hurricane, but was back in operation within a few days. Although only minor structural damage of the process equipment was caused by the hurricane winds, at the peak of the storm the plant was flooded with six feet of sea water which caused considerable damage to the pumps and motors, and necessitated the complete replacement of electrical facilities. Initial estimates of storm damage to the plant have been set at \$75,000.

President Fills FPC and SEC Vacancies

A DEMOCRAT and two Republicans were named by President Kennedy as commissioners to the Federal Power Commission and the Securities and Exchange Commission.

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Appointed to the FPC was Charles R. Ross, a 41-year-old Vermont Republican and head of that state's public service commission since 1950. The new SEC commissioners are Manuel F. Cohen, a Brooklyn Democrat, and Jack Melville Whitney II, a Republican from Chicago.

Ross fills a vacancy on the FPC caused by the death of Commissioner Frederick Stueck in July. Four of five members of the FPC are now Kennedy appointees; only former Chairman Jerome K. Kuykendall was named during the previous administration, and it is believed that he will resign and return to private law practice before his term expires the middle of next year.

Cohen replaces former SEC Chairman Edward Gadsby, a Republican, who resigned. His appointment also gives the SEC a Democratic majority, 3 to 2. Whitney takes the post formerly held by the late Earl F. Hastings, a Republican.

Delaware Compact, AEC Bill Signed by President

IN the last days of the first session President Kennedy signed into law two pieces of legislation which had caused much debate and controversy during the recent Congress. Becoming law were the Delaware River Compact and the Atomic Energy Commission authorization bill. On both measures the administration suffered defeats of a sort.

The Delaware Compact was placed on the President's desk without the power preference clause advocated by Interior Secretary Udall, and the AEC bill went to the White House without the hotly debated Hanford generating plant proposal, also backed by the Democratic administration.

The Congress accepted the House version of the Delaware Compact, which had been sponsored by Representative Francis E. Walter, advocate of the four-state river basin development proposal for many years.

In place of the power preference clause which would have given the federal governmental agencies priority over privately owned companies in the purchase of power which might be developed for sale, an amendment was inserted which provides that the consent of the Congress must be given for any project undertaken under the compact which would involve the use of federal moneys.

This temporarily postpones, probably until the next session of Congress, any government *versus* investor-owned power battle until actual authorization projects in the Delaware river basin are introduced.

THE Senate also accepted the House-passed version of the AEC authorization bill which eliminated the Hanford plant proposal. The original measure would have constructed two steam-generating plants costing \$95 million at the Hanford site to utilize by-product steam from a plutonium-producing atomic reactor. The House twice rejected the original project and most recently turned down a compromise proposal which would have authorized only one of the two generators. The three rejections in the House made it apparent to the Senate that the Hanford plant, no matter in what form, was completely unacceptable to the House, and so passed the authorization bill without the Hanford measure because of the importance of having other vital projects contained in the omnibus bill get under way as soon as possible.

Telephone and Telegraph

Congress Adjourns— Communications Bills Enacted

THE first session of the 87th Congress has come to a close and all legislative proposals not acted upon will remain fallow until the lawmakers get back to work in January of 1962. In looking back on this first session, it is surprising to note the large numbers of bills that were enacted. It is true that the session ran later into September than most Congressmen had anticipated. However, despite its being a "new" Congress, an impressive list of bills went through the legislative mill.

A great deal of the legislation was actually processed during the last two months of the session. This is just about the normal procedure since quite a bit of time slips by while committees are being organized, bills drafted, and hearings scheduled. When the session finally did get under way the legislators took up a number of matters that were of vital interest to the communications industry. Some of these were relatively minor in character (see page 611), while others held more far-reaching implications for the industry.

One of the hot potatoes of the session was the bill introduced by Representative Roosevelt (Democrat, California) to amend the Fair Labor Standards Act.



President Kennedy considered a boost in the minimum wage to be one of the "must" bills—one of his campaign promises. Extensive hearings were held on this subject, but, in the final analysis, the bill fairly well resembled that which had been requested by the administration.

OF prime interest to the telephone industry was the drastic curtailment of the telephone switchboard operators' wage exemption. As signed into law the exemption now includes only those employed by an "independently owned public telephone company which has not more than 750 stations." The import of this is that the exemption is now not available either to Bell companies (which never used it) or to any large independently owned system or company having one or more switchboards serving more than 750 stations over all. Thus, the exemption applies only to those very small companies whose entire operation serves less than 750 subscribers.

Another proposal which developed into a stiff congressional fight was the proposal to reorganize the Federal Communications Commission. Originally, the President submitted a reorganization plan for the commission, but the House of Representatives on June 15th refused to

PUBLIC UTILITIES FORTNIGHTLY

go along with the proposal on the ground that it gave too much authority to the commission chairman who is a presidential appointee. When the House refused to approve the President's plan, this forced the proposal to go through the regular legislative process. In the end the bill which was enacted (except for the above stated objectionable feature) fairly well resembles what the administration had asked for. It provides for a delegation of decision-making authority to various lower levels of the commission, and, under the new law, decisions can be made by hearing examiners, panels of commissioners, single commissioners, and especially qualified staff examiners. This delegation of decision making must first be made by the full commission, however, rather than by the chairman alone, as the White House had proposed.

ALso included in the reorganization plan is a provision which does away with a mandatory right of appeal or review by the full commission of lower-level decisions. The FCC now has the discretion to grant such reviews rather than having dissatisfied parties automatically entitled to such a review. Parties to FCC cases still retain the right to appeal to the United States circuit court of appeals if they are dissatisfied with the final decision of the commission no matter at what level this might occur. It is hoped that this new plan will aid the commission in cleaning up a backlog of cases and generally improve efficiency of operation.

Once again Congress saw fit to extend for another year the 10 per cent excise tax on telephone service. Previously this tax had been self-perpetuating; however, during the 86th Congress, this feature tax law was amended so that the excise taxes must be renewed each year.

In all probability more bills were intro-

duced in Congress to remove this tax than on any other single subject. Although the telephone companies presented a stiff fight to get rid of the tax, it was apparent almost from the start that the federal government would be little inclined to cut itself off from this lucrative source of income.

THE extension of the tax for another year sets up a sure-fire fight for the second session of the 87th Congress when the lawmakers will once again be forced to grapple with the problem. There is no denying that there are strong pressures for the killing of this tax. The large number of bills on the subject attest to this fact. A good many Congressmen believe that the war-imposed levy should be removed.

The pressure brought to bear upon the lawmakers by their constituents is considerable and the volume of mail received by the Congressmen on this subject cannot but impress the elective representatives that the telephone subscribers are tired of paying a luxury tax on a service that most people consider a necessity. The telephone industry's objections are quite obvious. Not the least among its complaints is the fact that the telephone companies are forced into the rôle of being tax collectors.

The administration (and, it should be noted, this was also the position of the Eisenhower administration) feels that the telephone excise tax is needed for budget purposes. The very objection that the telephone companies have against collecting the tax are precisely the reason that the government favors it. It provides a large source of income with a minimum amount of work for the government in collecting it. The tax is with us for another year but when Congress comes back to work in January of 1962, another fight

TELEPHONE AND TELEGRAPH

over this matter is sure to take place before it once again expires in June.

Bell and Western Electric Forecast Future

IN mid-September the presidents of the Bell Telephone Laboratories and Western Electric Company addressed the fiftieth anniversary convention of the Telephone Pioneers of America, meeting in Boston. Dr. James B. Fisk, the president of Bell Telephone Laboratories, noted that picture-telephones and such advances as automatic call-back from a busy line are some of the developments that can be expected in the future. He forecast that telephones of the world will be linked by way of earth satellites and the electronic central offices of the future will have unparalleled flexibility to serve varied customer needs. Dr. Fisk pointed out that Bell system research has given a substantial stimulus to the economy. He stated:

The great electronics industry has been nourished in large measure by communications science and technology, the semiconductor industry stems directly from the invention of the transistor. The Bell system had much to do with the origins of both analog and digital computers, and from work in information processing and electronic switching come major contributions.

Dr. Fisk placed special emphasis on the fact that a distinctive feature of Bell system research and development is the high degree of integration which produces a unified approach to telephone engineering and development. Without an integrated laboratory, in an integrated Bell system, he stated that it is hard to see how the final service characteristics of communi-

cations systems could be kept clearly in focus throughout their evolution in physical development, manufacture, and use.

H. I. ROMNES, Western Electric's president, also stressed the need for teamwork in order to meet the demands of the fast-growing telephone sciences. He pointed out that Bell Labs and Western Electric engineers work side by side to insure that products are not only serviceable but manufacturable as well. Western Electric, he stated, is now one of the ten largest industrial concerns in the United States. Venturesomeness, craftsmanship, and service are the basis of Western Electric's growth, he attested.

The translation of radically new concepts into a massive production effort and doing it fast requires teamwork, Mr. Romnes noted. In this he specifically referred to defense projects which utilize the experience of the company in co-ordinating the efforts of many hundreds of suppliers and subcontractors to create integrated systems of great technical complexity. Today, he stated, Western Electric contributes to Bell system services in six areas: equipment engineering, manufacturing, installations, purchasing, distribution, and repair.

Taking a look into the future, Mr. Romnes predicted that there would be a closer relationship among all members of the Bell system team as problems of design and production overlap. This will mean that more Bell Lab and Western Electric people will combine in technical assaults on given problems. In this same area Western Electric will increase efforts to compress the intervals required to bring new facilities into being and to achieve new economies through increased standardization and readier availability of product.



Financial News and Comment

By OWEN ELY

Recent Developments in Communications

THE communications industry is in a state of rapid transition from the old methods of "talking on the phone" and "sending a wire," to new, diverse, and far more efficient methods of communication. American Telephone and Telegraph and Western Union are both offering new combination services on a standardized rate basis which will give big industrial users the choice of a variety of methods of communication. These services bear strange names such as Telex, Telpak, etc. Washington is taking a close look at them to make sure that no one will obtain monopoly advantages.

The Bell system recently advertised five devices by which it could help brokers to handle today's very heavy trading volume: the Call Director order equipment, which gives traders access to over 200 lines, with push buttons; the Call Director telephone, useful for commodity trading, moderate overcounter operations, etc., with 18 or 30 buttons; the Dial switchboard service; the Teletypewriter (already in use for many years for flexible interoffice communication); and the Data-Phone service by which business machines can "talk" over regular telephone lines at speeds of up to 1,200 bits per second.

GENERAL TELEPHONE is introducing a "no hands" telephone with improved tone quality. The new phone set was to be displayed at the annual convention of the United States Independent Telephone Association in Chicago, after which it would be placed on the market. The service will be about \$5 to \$7 a month above regular phone rates, to be reduced after the residential market develops. The new phone will have obvious advantages whenever the user wants to use both hands for writing, searching for information, etc. The new transmitter is said to be sensitive enough to pick up sound vibrations even if the user has his back turned to the instrument—a big improvement over the earlier models which had to be addressed directly. It should have a good potential market among professional and businessmen; it will also permit a family group

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to share a talk with an out-of-town relative or friend.

This department has already discussed (in the August 31st issue) the proposed satellite system to supplement existing cables and radiotelephone facilities for intercontinental communications. Undoubtedly the Bell system, with its tremendous research facilities and its well-advanced program, will play a very important rôle in the development of the satellite system. However, many problems relating to the rights and functions of communications companies and manufacturers of satellite equipment, as well as the character of the rôle of the federal government, remain to be ironed out. (The report of the "ad hoc" committee is due October 13th.)

THERE have been some exaggerated reports about the future possibilities of the satellite system when it is eventually in operation, but initial costs will be very heavy. As General Sarnoff, chairman of the RCA, said in an address a few weeks ago, "a communications satellite is basically a distance booster. It is as if we picked up a microwave tower from the ground and hung it in the sky. This would increase enormously the range over which communications could be sent and received. The international communications business of all the American carriers today amounts to about \$135 million a year. In the 1970's, with a satellite system in use, operating revenues may reach the \$1 billion mark. This is a respectable amount, but even if we double this figure, it would still be 98 per cent less than the fantastic [reported] figure of \$100 billion a year."

The trend is toward greater use of microwave for both domestic and international communications, since the use of very short waves frees radio transmission

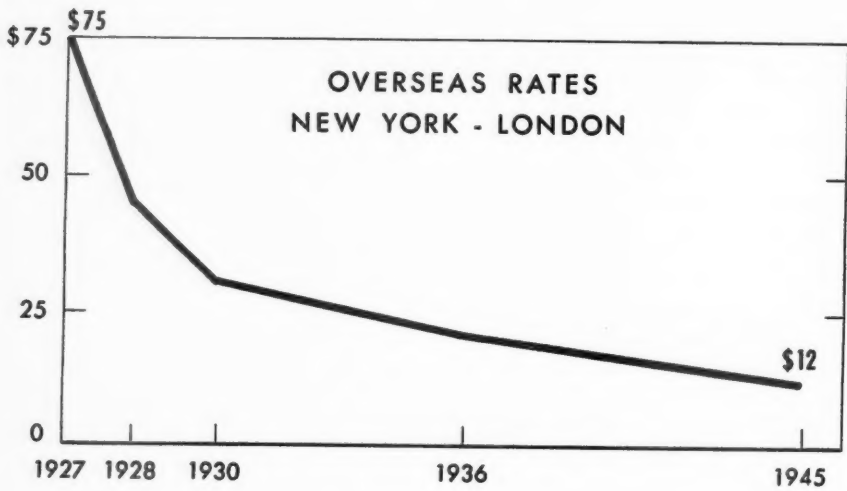
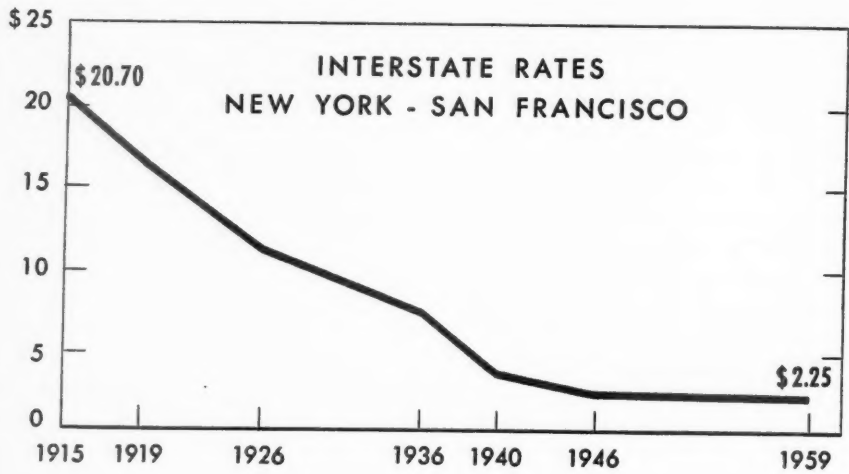
from most of the bad effects resulting from atmospheric disturbances. The Bell system has used microwave facilities since 1947, its first circuits being between New York and Boston. Since then, its microwave system has grown until it includes more than 240,000 channel miles and is in use throughout the country. The latest type of microwave channels (not yet in widespread use) can carry 11,000 telephone conversations or 12 television programs at the same time. Many electric and gas utilities also maintain private microwave systems.

WESTERN UNION has a four-year program to build a nation-wide microwave system. It already has well under way construction of the \$65 million COMLOGNET microwave system for the Air Force, designed largely for automatic exchange of data by machines using super high-frequency waves. The system will connect and service Air Force bases and is expected to yield about \$20 million additional annual revenue to the company. Western Union's Telex service (customer-to-customer communication service) is also being expanded over a four-year period; it now serves 23 cities and will eventually cover 181. This network is now being connected with Telex services in foreign countries.

Even the microwave system may not be the last word in communications efficiency. "Maser" and "laser" — narrow and highly intense beams of light which can be sent a million miles if desired — are being developed by Bell Laboratories and other research organizations. Union Carbide has just announced that it can now "grow" a new type of crystal (synthetic ruby and sapphire) which apparently represents a breakthrough in this field. It is thought that the new beam of light will be able to carry information

PUBLIC UTILITIES FORTNIGHTLY

REDUCED LONG DISTANCE TELEPHONE RATES



All are daytime rates for a three-minute call.

FINANCIAL NEWS AND COMMENT

through modulation of its waves, perhaps directing manufacturing operations and performing other communications tasks. However, it is understood that this form of light is more subject to atmospheric obstacles than microwave, which may tend to limit its use somewhat.

CHANGES are also taking place in the corporate make-up of the communications industry. A few years ago there were some 5,000 small independent telephone companies, most of them in small towns and many operated by family groups. The number is being rapidly whittled down (to perhaps 3,500 currently), as family funds prove inadequate to provide for needed construction to take care of dial conversions, normal growth, etc. The larger holding companies—General Telephone, United Utilities, and others—have acquired some of the independents. (AT&T acquires them only rarely.) Others are being taken over by REA-financed groups or by recently organized small holding companies, such as Independent Telephone Corporation, now traded on the American Stock Exchange. The absorption of the very small independents into larger groups should be favorable for the industry as a whole, permitting improved service and better

financing. The smaller independents now comprise about 7 per cent of the industry.

On the other hand, one big company, Pacific Telephone and Telegraph (in the Bell system), has decided that it is too large and is setting up a subsidiary, Pacific Northwest Bell Telephone, to take over the states of Oregon and Washington and part of Idaho, leaving California to Pacific Tel. & Tel. As *Business Week* points out, the economy of the Pacific Northwest is different from that of California, being based on forest products, fishing, farming, and hydro power, with a few industrial companies such as Boeing; and the character of the farming is quite different from that in California. Local management is said to be popular in the Northwest, since it is in contrast with the "absentee" management of many enterprises in that area. Without the split-off, Pacific Tel. might soon have been too big for its management to keep in effective touch with the public in Oregon and Washington.

UNDER the new setup, Pacific Northwest Bell Telephone will have annual revenues of about \$221 million, the same as PT&T had in 1945. It will serve a population of about 4.9 million and is expected to show rapid growth. The new

CURRENT YIELD YARDSTICKS
(Standard & Poor's Indexes)

	Sept. 13, 1961	1961 Range		1960 Range	
		High	Low	High	Low
Utility Bonds—AAA	4.56%	4.56%	4.33%	4.72%	4.32%
—AA	4.62	4.64	4.38	4.73	4.36
—A	4.62	4.67	4.56	4.86	4.49
—BBB	4.81	4.88	4.48	5.16	4.56
Preferred Stocks*	4.71	4.78	4.61	4.88	4.57
Utility Common Stocks	3.12	3.62	3.10	4.11	3.61
Yield Spread: AAA Bonds					
Exceeded Common Stocks	1.44	0.94	1.23	0.61	0.71

*Twelve industrial and two utility issues (high-grade).

PUBLIC UTILITIES FORTNIGHTLY

company will start out with debt of about \$200 million (a 4½ per cent demand note given to PT&T) and a stock equity of about \$377 million.

Long-distance Communications A Real "Growth Industry"

THE first transcontinental telephone line, New York to San Francisco, was opened January 25, 1915, the daytime rate for a three-minute call being \$20.70. In 1919 the rate was reduced to \$16.50, in 1926 to \$11.30, in 1936 to \$7.50, in 1940 to \$4, in 1946 to \$2.50, and in 1959 to \$2.25, the present rate. In 1919 the distance a subscriber could phone for the station-to-station day rate of \$2.25 was only about 350 miles, but today one can call coast-to-coast for the same amount. Since 1940, interstate long-

distance rates have declined 19 per cent, while the wholesale price index and the consumer price index have more than doubled.

At the same time, of course, long-distance service has become much faster and more dependable. Total U. S. toll revenues in 1960 amounted to \$1,744 million compared with \$922 million in 1954, reflecting an average annual gain of nearly 14 per cent compounded; however, the gain in 1960 was only 8 per cent.

ON January 7, 1927, the first commercial radiotelephone service was opened between New York and London. The daytime rate for a three-minute call was \$75. Reductions (made on a negotiated basis—there have been no formal rate cases on transoceanic rates) have been made as follows:



ELECTRIC AND GAS UTILITY SECURITY OFFERINGS IN AUGUST

Amount Date (Mill.)	Description	Price To Public	Under- writing Spread	Offer- ing Yield	Aver. Yield For Securities Of Similar Quality	Moody Rating	Success Of Offer- ing
<i>Bonds and Debentures</i>							
8/1 \$ 4	Northwestern Public Service 1st 5½s 1987	102.15	1.19C	5.10%	4.90%	Baa	d
8/3 25	Long Island Lighting 1st 5s 1991	101.56	.83C	4.90	4.70	A	b
8/3 30	Texas East. Transmission Deb. (s.f.) 5½s 1981*	100.00	1.25N	5.38	—	Ba	d
8/9 20	Northern States Power 1st 4½s 1991	100.39	.74C	4.85	4.56	Aa	a
8/16 40	Consumers Power 1st 4½s 1991*	100.40	.71C	4.60	4.48	Aaa	c
<i>Preferred Stock</i>							
8/3 20	Texas Gas Transmission 5.125% Conv. Pfd.	100.00	2.75N	5.13			a
8/15 7	Wisconsin P. & L. 4.96% Pfd.	100.00	N	4.96			a
<i>Common Stock—Offered to Public</i>							
8/10 2	City Gas Co. of Florida	22.25	1.25N	1.35		Earns.- Price Ratio 3.1%	a

*Nonrefundable for about five years. C—Competitive. N—Negotiated. a—It is reported that the issue was well received. b—It is reported that the issue was fairly well received. c—It is reported that the issue sold somewhat slowly. d—It is reported that the issue sold slowly.

Source, Irving Trust Company

FINANCIAL NEWS AND COMMENT

March 4, 1928	\$45
May 11, 1930	30
July 1, 1936	21
June 23, 1945	12

IN 1927 some 2,500 overseas telephone calls were completed. In 1957, after the first transcontinental telephone cable was opened, the total rose to 1,668,400 and in 1960 to 3.7 million—a three-year average annual rate of gain of 30 per cent compounded, with 1960 showing a 20 per cent gain. Today Bell system overseas service reaches 163 countries and areas, over 500 overseas circuits, and there are 20,000 miles of deep-sea cables in service. The proposed satellite system will not only provide for future growth but will expand the scope of overseas communications to include TV and other broad-band messages.

Electrical World's Forecasts For 1960-80

IN its twelfth annual forecast for the electric light and power industry, *Electrical World* (September 18th issue) reaches various statistical conclusions which we shall digest briefly here. The forecast is divided into two periods—"the next four years" and "1965-80"—and actual results for the years 1955-60 are also presented. Since rate of growth is the factor observers seem most interested in, we have prepared from the *Electrical World* data (pages 119, 120) the percentage gains in kilowatt-hour sales for the five-year periods from 1955 to 1980. (See table below.)

Generating capability is expected to increase from 175 million kilowatts in 1960 to 681 million by 1980, a gain of 289 per cent. Load factor will increase from 66 per cent in 1960 to 69 per cent in 1980. Gross reserve margin (as a percentage of peak load) is expected to decline from 32 per cent in 1960 to 22 per cent in 1965 and remain around that level.

ANNUAL expenditures for new plant are expected to increase from \$4.7 billion in 1960 to \$6.5 billion in 1970 and \$17.3 billion in the year 1980. The gain in such annual expenditures over the 20-year period is estimated at 269 per cent compared with a gain in kilowatt-hour sales of 328 per cent, indicating anticipated gains in plant efficiency, and making little if any allowance, apparently, for possible inflation of the currency. Annual additions to kilowatt capacity are expected to increase 326 per cent in the year 1980 compared with 1960. The 1960 added capacity of 11.1 million kilowatts included 9.5 million steam and 1.6 million hydro, with no nuclear power installed; the forecast for 1980 is 36.4 million kilowatts steam, only 1.1 million kilowatts hydro, and 9.8 million kilowatts nuclear power.

A breakdown is given for industrial kilowatt-hour sales: Manufacturing companies are expected to increase their purchases of power from 340 billion kilowatt-hours to 1,403 billion, a gain of 313 per cent; sales of electricity to aluminum and magnesium refiners will increase

	Actual		Estimated			
	1955- 60	1960- 65	1965- 70	1970- 75	1975- 80	1960- 80
Residential	57%	47%	51%	50%	48%	392%
Commercial	50	52	47	47	47	381
Industrial	33	41	44	37	37	281
Miscellaneous	35	37	38	35	33	241
Total	42%	44%	46%	42%	42%	328%

PUBLIC UTILITIES FORTNIGHTLY

from 37 billion kilowatt-hours to 87, a gain of 135 per cent; but sales to the Atomic Energy Commission are expected to decline from 55 billion to 47 billion kilowatt-hours. Industrial plants with their own systems generated 88 billion kilowatt-hours last year, and it is estimated that they will generate 228 billion in 1980, an increase of 159 per cent.

IN the residential use of electricity, the number of customers is expected to increase from 51 million last year to 80 million in 1960, a gain of 57 per cent. With the increasing use of electric heating (from less than one million homes in 1960 to 29 million in 1980), usage per residential customer is expected to increase from 3,851 kilowatt-hours in 1960 to 12,223 in 1980, a jump of 217 per cent. Revenues per kilowatt-hours will decline only modestly, according to the *Electrical World* forecast—from 2.47 cents per kilowatt-hour to 2.36 cents.

The "economic indicators" used as basic material for the forecast were as follows:

	1960	1980	Per Cent Increase
U. S. Population ..	180	260	44%
Industrial Production Index	108	265	145
New Dwellings (Millions)	1.3	2.2	72
Households (Millions)	52	74	42
Gross National Product (Billions 1960 Dollars)	504	1,145	127
Disposable Income (Billions 1960 Dollars)	352	800	127

Regarding the outlook for residential sales of electricity, *Electrical World* points out that while the big anticipated gain in electric heating of homes is a very favorable factor, other factors are less favorable. "In 1959 . . . housing starts hit 1.55 million. The economy won't match this figure until 1964, and the difference is too wide to be bridged by the extra appliances offered in today's homes."



FINANCIAL DATA ON GAS UTILITY STOCKS

Approx. Rev. (Mill.)		9/12/61 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	Per Cent Increase In Share Earnings, Recent 5-yr. Avg.	Price- Earnings Ratio	Div. Pay-out	Approx. Common Stock Equity	
\$ 7	O Ala. Tenn. Nat. Gas	28	\$1.20	4.3%	\$1.61Je	2%	7%	17.4	75%	42%
240	S American Nat. Gas	44	1.20	2.7	2.17Je	13	7	20.3	55	38
114	A Ark-Louisiana Gas	40	1.00	2.5	1.55Ma	D12	46	25.8	65	45
65	O Colo. Interstate Gas	45	1.25	2.8	1.98Je	12	13	22.7	63	27
517	S Columbia Gas System ..	27	1.10	4.1	1.59Je	8	8	16.9	69	40
23	O Commonwealth N. G. ...	31	1.10	3.5	1.82Je	3	6	17.0	60	55
363	S Consol. Nat. Gas	63	2.30	3.7	2.89Ma	D9	2	21.8	80	63
505	S El Paso Nat. Gas	26	1.30	5.0	1.46De	10	4	17.8	89	21
59	S Equitable Gas	41	1.85	4.5	2.17Je	D15	3	18.9	85	45
47	O Houston N. G.	33	.80	2.4	1.55Ap	D5	20	21.3	52	21
25	O Kansas Nebr. Nat. Gas .	31	1.04	3.4	1.82Je	D2	10	17.0	57	39
131	S Lone Star Gas	26	1.00	3.8	1.16Je	D4	2	22.4	86	52
85	S Miss. River Fuel	39	1.60	4.1	2.25Ma	D13	3	17.3	71	52
32	S Montana Dakota Util. ..	34	1.20	3.5	1.97Je	D10	6	17.3	61	31
33	S Mountain Fuel Supply ..	36	1.40	3.9	1.92Je	5	5	18.8	73	49
113	S National Fuel Gas	29	1.20	4.1	1.84Je	7	4	15.8	65	54
191	S Northern Nat. Gas	38	1.50	3.9	2.14Ma	5	5	17.8	70	33
43	S Oklahoma Nat. Gas	33	1.40	4.2	2.02Je	D6	5	16.3	69	34
140	S Panhandle East. P. L. ...	44	1.80	4.1	3.05De	D9	4	14.4	59	43
239	S Peoples G. L. & Coke	93	3.00	3.2	4.47Jy	5	9	20.8	67	42
35	O Pioneer Nat. Gas	32	.88	2.4	1.25De	D10	6	25.6	70	40
143	S Southern Nat. Gas	44	2.00	4.5	2.47Je	18	—	17.8	81	36
55	O Southern Union Gas	36	1.12	3.1	2.01Je	D1	4	17.9	56	30
555	S Tenn. Gas Trans.	23	1.12	4.9	1.40Jy	16	12	16.4	80	28
317	S Texas East. Trans.	17	.80	4.7	1.03Je	11	—	16.5	78	11
133	S Texas Gas Trans.	37	1.50	4.1	2.45Je	D2	10	15.1	61	26

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Approx. Rev. (Mill.)		(Continued)	9/12/61 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings.	Per Cent Increase In Share Earnings Recent 5-yr. Avg. Ratio	Price- Earnings Ratio	Div. Common Pay-out	Approx. Common Stock Equity	
171	O	Transcont. Gas P. L. ...	23	1.00	4.3	1.24Je	13	6	18.5	80	21
389	S	United Gas Corp.	36	1.50	4.2	2.38My	5	2	15.1	63	42
Averages					3.8%		1%	8%	18.6	70%	
Retail Distributors											
\$ 40	S	Alabama Gas	35	\$1.60	4.6%	2.28Je	D18%	—%	15.3	70%	33%
68	O	Atlanta Gas Light	29	1.00	3.4	1.55Je	D7	9	18.7	65	44
3	O	Berkshire Gas	21	1.00	4.8	1.53My	29	5	13.7	65	42
8	A	Bridgeport Gas	33	1.68	5.1	2.22Ma	17	—	14.9	76	54
7	O	Brockton-Taunton Gas ..	25	1.06	4.2	1.54F	20	14	16.2	69	41
96	S	Brooklyn Union Gas	44	1.20c	2.7	*1.77Je	—	* 5	*24.9	68	43
15	O	Cent. Indiana Gas	18	.80	4.4	.84Je	D12	—	21.4	95	58
7	O	Chattanooga Gas	6	.30	5.0	.34My	D23	5	17.6	89	54
18	O	Elizabethtown Cons. Gas	62	1.80	2.9	3.41De	17	9	18.2	52	79
77	O	Gas Service	40	1.72	4.3	2.35Je	D18	8	17.0	73	35
9	O	Hartford Gas	56	2.40	4.3	3.34Je	10	8	16.8	72	53
3	O	Haverhill Gas	32	1.60	5.0	2.21Je	11	7	14.5	72	55
23	O	Indiana Gas & Water ...	28	1.00	3.6	1.56Jy	D2	—	18.0	64	44
62	S	Laclede Gas	32	1.05	3.3	1.60Je	D2	5	20.0	66	38
9	A	Louisiana Gas Service ..	19	.68	3.6	1.10Je	D13	—	17.3	62	48
8	O	Mich. Gas Utilities	16	.60	3.8	.67Je	D40	8	23.9	89	32
56	O	Minneapolis Gas	37	1.60	4.3	1.64Je	D28	5	22.6	97	45
20	O	Miss. Valley Gas	27	1.20	4.4	1.80Ma	D7	—	15.0	67	40
7	O	Mobile Gas Service	27	1.10	4.1	1.50My	3	—	18.0	73	40
8	O	New Haven Gas	41	2.00	4.9	2.94De	D9	5	13.9	68	69
18	O	New Jersey Nat. Gas ..	37	1.00f	4.7	*1.77Je	*12	*11	*20.9	56	34
130	O	Nor. Illinois Gas	59	1.40	2.4	2.21Jy	4	11	26.7	63	42
11	O	North Penn Gas	14	.65	4.6	1.18Je	28	7	11.8	55	65
23	O	Northwest Nat. Gas	30	.92	3.1	*1.62Je	* 1	* 7	*18.0	57	34
364	S	Pacific Lighting	59	2.40	4.1	3.10Je	D2	5	19.0	77	39
15	O	Piedmont Nat. Gas	15	.50	3.3	.89Ma	1	—	16.8	56	23
2	O	Portland Gas Light	24	r	—	.58Je	D67	4	—	—	29
12	A	Providence Gas	12	.56	4.7	.80My	38	2	15.0	70	48
4	A	Rio Grande Valley Gas .	7	.16	2.3	.37Je	23	7	18.9	43	46
6	O	So. Atlantic Gas	19	.90	4.7	1.35Je	55	8	14.1	67	30
18	S	So. Jersey Gas	45	1.10	2.4	1.50Je	5	14	30.0	73	53
38	S	United Gas Improvement	67	2.40	3.6	3.54Je	4	10	18.9	68	50
71	S	Washington Gas Light ...	75	2.64	3.5	4.25Je	2	5	17.6	62	38
20	O	Washington Nat. Gas ...	32	1.00	3.1	1.46Je	D10	14	21.9	68	37
13	O	Western Ky. Gas	24	.80x	3.3	1.40Je	D19	11	17.1	57	36
60	O	Western Power & Gas ..	28	1.00	3.6	1.50Je	—	8	18.7	67	17
Averages					3.9%		2%	6%	18.4	70%	



FINANCIAL DATA ON TELEPHONE, WATER, AND TRANSIT STOCKS

Approx. Rev. (Mill.)		9/12/61 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	Per Cent Increase In Share Earnings Recent 5-yr. Avg. Ratio	Price- Earnings Ratio	Div. Common Pay-out	Approx. Common Stock Equity		
Communications											
\$7,920	S	American T. & T. (Cons.)	120	\$3.60	3.0%**	\$5.52My	3%	5%**	21.7	65%	64%
405	A	Bell Tel. of Canada	53	2.20	4.2	2.51De	5	—	21.1	88	58
54	O	Cin. & Sub. Bell Tel.	110	4.50	4.1	5.89De	6	2	18.7	76	77
317	A	Mountain Sts. T. & T. ...	30	.90	3.0	*1.33My	3	3	*22.6	68	74
405	A	New England T. & T. ...	47	1.90	4.0	2.33Je	2	7	20.2	82	56
1,135	S	Pacific T. & T.	44	1.14	2.6	*1.41My	**D7	3	*31.2	81	61
136	O	So. New Eng. Tel.	53	2.20	4.2	2.61De	4	6	20.3	84	66
Averages					3.6%		1%	4%	22.3	78%	
Independents											
\$ 4	O	Anglo-Canadian Tel.	43	\$1.20	2.8%	\$2.48Je	D6%	15%	17.3	48%	49%
59	O	British Col. Tel.	47	2.20	4.7	2.94Je	D4	—	16.0	75	27

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Approx. Rev.		(1961)	(Continued)	9/12/61 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	Per Cent Increase In Share Earnings Recent 5-yr. Avg.	Price- Earnings Ratio	Div. Pay- out	Approx. Common Stock Equity
4	O	Calif. Inter. Tel.	24	.70	2.9	1.51Je	208	NC	15.9	46	24
28	O	Calif. Water & Tel.	38	1.36	3.6	2.34Je	17	5	16.2	58	44
25	O	Central Telephone	28	.88	3.1	1.62Je	1	4	17.3	54	34
6	O	Commonwealth Tel.	26	1.00	3.8	1.64Je	NA	8	16.7	64	35
6	O	Florida Tel.	27	1.00	3.7	1.33Ma	2	8	20.3	75	38
1,174	S	General Tel. & Elec.	25	.76	3.0	** .98Je	D2	3	**25.5	77	42
27	O	Hawaiian Telephone	20	.54	2.7	** .82Jy	19	1	**24.4	66	39
10	O	Inter-Mountain Tel.	21	.80	3.8	.92De	19	—	22.8	87	54
11	A	Puerto Rico Tel.	81	1.80	2.2	3.31De	71	15	24.5	54	44
28	S	Rochester Tel.	28	1.10	3.9	1.59Je	7	1	17.6	69	31
5	O	Southeastern Tel.	24	1.00	4.2	1.30Ma	9	2	18.5	77	39
14	O	Southwestern St. Tel. ...	31	1.28	4.1	1.72Je	7	5	18.0	74	39
14	O	Tel. Service of Ohio	28	.36z	1.3	1.29Je	D1	9	21.7	28	34
47	O	United Utilities	28	.80	2.9	1.30Jy	15	7	21.5	61	39
22	O	West Coast Tel.	35	1.36	3.9	1.97Je	—	5	17.8	69	40
277	S	Western Union	45	1.40	3.1	1.80De	D31	—	25.0	82	82
Averages						3.3%		20%	5%	19.8	65%
Water Companies											
Holding Companies											
\$ 51	S	American Water Works .	24	\$1.00	4.2%	\$1.53Je	D20%	9%	15.7	65%	19%
Operating Companies											
\$ 6	O	Bridgeport Hydraulic ..	45	\$2.00	4.4%	\$2.35De	26%	3%	19.1	86%	54%
17	O	Calif. Water Service ...	27	1.20	4.4	1.55Jy	D2	2	17.4	77	31
7	O	Elizabethtown Water ...	29	1.40	4.8	1.46De	D16	—	19.9	96	64
13	S	Hackensack Water	60	2.40	4.0	*4.05De	*D7	*2	*14.8	59	34
10	O	Indianapolis Water	29	1.20	4.1	1.63Je	D4	1	17.8	74	32
6	O	Jamaica Water	46	2.20	4.8	2.92Je	D7	1	15.8	75	29
6	O	New Haven Water	71	3.40	4.8	3.49De	20	1	20.3	97	55
3	O	Ohio Water Service	32	1.50b	4.7	1.69Je	5	—	18.9	89	32
13	O	Penn. Gas & Water	33	1.40	4.2	1.89Je	6	6	17.5	74	33
12	O	Phila. & Sub. Water	33	.85v	2.6	1.58Je	D4	8	20.9	54	30
11	O	South. Calif. Water	33	1.10	3.3	1.61Je	16	5	20.5	68	28
4	O	Southern Gas & Water ..	26	1.00	3.8	1.58Je	2	5	16.5	63	19
Averages						4.2%		3%	3%	18.3	76%
Transit Companies											
\$ 21	O	Baltimore Transit	9	\$.50d	5.6%	\$.52De	D50%	—	17.3	96%	49%
11	O	Cincinnati Transit	8	.40	5.0	.55De	D40	10%	14.5	73	55
68	S	Fifth Ave. Lines	21	t	—	1.07De	—	—	19.9	—	65
323	S	Greyhound Corp.	25	1.10a	4.4	1.64De	—	10	15.2	67	70
38	S	Nat. City Lines	19	1.20	6.3	1.73De	D22	—	11.0	70	94
13	O	Niagara Frontier Trans.	15	.80	5.3	2.13De	190	8	7.0	38	75
20	A	Pittsburgh Rys.	14	.30	2.1	—	—	—	—	—	90
6	O	Rochester Transit	7	.40	5.7	.87De	D20	—	8.0	46	100
20	O	St. Louis P. S. "A"	10	.80	8.0	.53De	D31	—	18.8	151	94
13	S	Twin City R. T.	15	1.00	6.7	1.26De	—	—	11.9	87	65
20	O	United Transit	6	.70	11.7	.63De	D28	—	9.5	111	53
Averages						6.1%	—	3%	13.3	82%	

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Jy—July; Au—August; Se—September; Oc—October; N—November; De—December. *Deferred taxes resulting from liberalized depreciation are not normalized. If normalized, the price-earnings ratio would be higher, and the rate of increase in share earnings would be smaller. NA—Not available. **On average shares. D—Decrease. a—Also 10 per cent stock dividend October 24, 1960. b—Also 2 per cent stock dividend September 30, 1960. c—Also 10 per cent stock dividend to be paid October 9, 1961. d—Fifty cents paid thus far in 1961, payments irregular. f—Regular annual 2 per cent stock dividend included in yield. r—Three per cent stock dividend January 16, 1961. t—Payments irregular, \$1 paid in 1960, 50 cents thus far in 1961. v—Also 3 per cent stock dividend payable January 6, 1961. (Similar dividend was paid January 7, 1960.) x—Also 12½ per cent stock dividend payable October 7, 1960. z—Plus 3 per cent stock dividend December 31, 1960. NC—Not comparable.



What Others Think

Communications Equipment Manufacturing— Midyear Outlook

IN September the Communications Industries Division of the United States Department of Commerce issued a mid-year review and outlook for the communications equipment manufacturing industry. This forecast indicates that domestic and foreign sales of communications equipment is up about 5 per cent over the corresponding period in 1960. It is further expected that the trend upward will continue, resulting in a new all-time high for the industry.

In a brief background statement the department notes that the communications manufacturing industry produces a wide variety of highly complex switching and transmission items, most of which are custom built for the varied needs of operating domestic telephone, telegraph, and international radio and cable companies. To meet the needs of this vast industry more than one-quarter million different pieces of equipment and parts are manufactured. In 1960 the number of persons employed by the industry increased to 188,000 and their salaries came to more than \$1 billion. It is expected that employment will increase slightly in 1961.

Contrary to previous estimates the shipments of communications equipment increased substantially in the first half of 1961; some slight increase had been an-

ticipated in this particular area. During the first half of 1961, domestic and foreign sales were approximately 5 per cent greater than in the first half of 1960. Increases in this field have been consistent since the recession of 1958. In 1958 domestic and foreign equipment sales amounted to some \$2.48 billion, in 1959 this figure had risen to \$2.65 billion, and in 1960 reached \$2.93 billion. Present estimates indicate that in 1961 a new high of \$3.2 billion will be reached. Interestingly enough, about 30 per cent of the total sales of the industry were to the government and the largest portion of these sales was for national defense projects.

THE report indicates that central office switching equipment and telephone sets are the common production indicators for the industry. In 1960 the following items of communications equipment and components were produced:

Product	Unit of Measure	1960
Telephone sets	Sets	9,102,400
Dial central office equipment	Lines	4,162,217
Dial PBX equipment ..	Lines	777,981
Manual central office equipment	Positions	3,782
Manual PBX equipment	Positions	8,625
Ringing machines	Units	31,557
Repeater equipment		

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(voice and telegraph) . Repeaters ...	329,365
Intercommunications equipment	Stations 24,203
Telegraph station equipment	Instruments . 70,926
Carrier equipment	Channels 70,766
Cable terminals	Units 974,300
Telephone booths, metal	Units 16,198

The outlook for 1961, according to this study, is bright. Annual sales are expected to be greater than anticipated six months ago and should reach about \$3.2 billion, which would be another peak year for the industry. Export sales are also expected to increase during 1961. It is forecast by the department that in 1961 the industry will purchase well over \$1.5 billion worth of materials and supplies from about 40,000 suppliers in more than 3,000 localities. About 90 per cent of these suppliers are small businesses, employing less than 500 persons who, as is

quite obvious, are dependent upon the economic health of the communications industry.

THE Commerce Department cautions that these projections for 1961 have been made with the assumption that production and shipments will not be significantly affected by any worsening of the cold war situation. This interjects a note of warning that would apply to just about every industry in the nation should any of the trouble spots of the world erupt into a war or "police action" which might demand mobilization of the armed forces on a wartime footing. Providing that such does not happen, it appears that the communications equipment manufacturing industry can look forward in 1961 to the setting of new records in foreign and domestic sales.

Words Fly over the Rainbow

FOR many years scientists have known that light waves, ranging from invisible infrared at one end of the spectrum, through all the spectral colors of the rainbow, to ultraviolet, are capable of transmitting voice communications.

From this basic bit of knowledge has evolved a fantastic new electronic device which promises such varied and diversified benefits as improved communications, a more effective type of radar, and knifeless surgery, says an article by Thomas O'Toole, entitled "The Amazing Maser" in *The Wall Street Journal*.

This new scientific development is known as the maser. The maser, first tested in a Columbia University laboratory seven years ago, picks up waves of energy (light or radio waves), greatly increases their strength, and sends them on their way in powerful, highly compressed beams. Scientists in the past few

years have seen the maser stir up more interest among members of their profession than did the development of transistors and diodes at the beginning of the last decade.

SEMICONDUCTORS, including transistors and diodes, constitute a major industry, with sales now reaching more than \$1.5 billion a year. Though the maser is so new that not all its eventual applications have been explored, and its future impact on the field of communications evaluated, scientists already can foresee its bringing about significant strides in communications. For example, one possibility is a transatlantic telephone cable capable of carrying 100 million calls simultaneously over the same line. In contrast, present cables can handle no more than 100 calls at once.

The maser's discovery has resulted in

WHAT OTHERS THINK

the development, by the Hughes Aircraft Corporation, of a small experimental radar that enables one to study details of an object the size of a kitchen table from seven miles away. The maser promises to provide surgeons with a way of operating without using a knife, and it could greatly aid space cartographers to map the face of the moon.

AT a meeting last spring of the Optical Society of America in Pittsburgh, the maser was by far the most discussed topic among the 700 scientists attending. Of 94 scientific papers presented at the meeting, 21 were devoted to some aspect of the masers.

The reason for this interest is twofold: (1) Masers promise to greatly increase the usefulness of light and radio waves; and (2) they are relatively simple devices. One type is little more than a ruby held in a piece of metal, while another is a long glass tube containing a mixture of neon and helium. Scientists have found that, under certain circumstances, weak light or radio waves fed into the maser will emerge amplified or strengthened hundreds of times, with little or no static.

The device stems from discoveries made around the turn of the century by Albert Einstein and the German physicist, Max Planck. These scientists found that atoms contain varying amounts of energy; that is, some atoms have relatively high-energy levels and some have relatively low-energy levels.

The pair also noticed that the energy status of some atoms can be altered by certain outside signals. A low-energy atom might absorb the outside signal and become a high-energy atom; a high-energy atom might have some of its energy knocked off and become a low-energy atom.

WORKING with these concepts, Dr. Charles Townes, a little over ten years ago, got the idea for the maser. He had been asked by the Navy to find a way to extend the range of microwave (high-frequency radio) signals. Dr. Townes reasoned that if materials could be found that contained atoms vibrating at certain frequencies, and, if these atoms could be hit by microwaves of the same frequencies, then the energy given off by the atoms when hit would significantly reinforce the microwaves. In an experiment he fired microwave signals into ammonia gas, which was known to be rich in high-energy atoms. The test worked and the microwaves that emerged from the ammonia gas were greatly strengthened.

Since that time, Dr. Townes and others, such as Dr. Arthur Schawlow, now of Bell Laboratories, have worked to perfect this technique. It was Dr. Townes who gave the maser its name: It stands for "microwave amplification by stimulated emission of radiation."

Some masers have been in practical use on a limited scale for some time. At the Naval Research Laboratory in Washington, D. C., a maser was attached to a 50-foot telescope more than two years ago. Mounted immediately behind the antenna, at the center of the telescope's parabolic reflector, the maser amplifies radio signals being received from distant stars.

One scientist has said that with a rather crude maser they have been able to pick radio signals from stars three times as far from earth as those from which they could receive signals with other amplifying devices. With such a maser, officials at the Naval Research Laboratory also were able to measure waves of energy given off by the planet Jupiter. This enabled them to make the first accurate calculation of the planet's temperature—a surface reading of 150 degrees.

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POSSIBLY the most dramatic use of masers to date in amplifying radio signals was in connection with Echo I, the balloon satellite launched in 1960. Scientists at a Bell Lab facility, using a maser to amplify signals bounced off Echo, say they have been able to pick up signals with a power of less than 100 billionth of a watt. The maser amplifies these radio waves sufficiently so that the signals can be put on tape by ordinary recorders. Without the masers, Project Echo would have been a flop.

Maser radars hold promise for defense, space exploration, and aviation safety, many scientists think. One scientist estimates that a conventional radar system using microwaves would require an antenna 60 feet in diameter to achieve the same capability as a maser radar with an antenna four inches in diameter. Such a saving in space and weight requirements, with no sacrifice in radar performance, could be highly important in aviation.

Big radar sets now add significantly to the weight and bulk of many airplanes.

An early application of maser radar systems undoubtedly will be in mapping the moon, according to Dr. Schawlow. Radio or light beams, greatly amplified by masers, would be bounced off the moon and picked up and amplified again by receiving equipment on earth. This method would provide a sharper definition of the moon's surface than is now possible, enabling scientists to calculate the heights of peaks and depths of craters.

IN defense work, maser radars could be put to work in conjunction with conventional radar networks designed to warn of planes and missiles approaching the United States. If a conventional radar sweeping the sky spotted an unknown object, the maser radar could be beamed

at the object in such a way as to pick up much greater detail.

In addition to amplifying radio and light waves, masers are capable of producing signals that are one million or more times as sharp as ordinary signals. For instance, scientists say that a light beam produced by a maser can be made so intense it could be focused through a hole 50 millionths of an inch in diameter.

Using this ability to create heat (light) in tiny spots, the technical research group in experiments with rabbits has burned tumors off the retinas behind the animals' eyeballs. The scientists used a maser to create a powerful light beam they turned into a rabbit's eye. The lens of the eye itself is then used to further compress the light. The light is not strong enough to damage the eye until it has passed through the eye's lens. Then the beam hits such a small spot on the retina and lasts for such a short time (one-thousandth of a second) that it can be put to constructive use. The procedure could also be used to "spot weld" a detached retina or by surgeons to cauterize wounds in only a fraction of a second, with a great reduction of scar tissue over ordinary surgical operations.

THE greatest impact of masers on everyday life, however, probably will come in the field of communications. Two properties of masers make them well-suited for this purpose. First, masers operate in the very highest-known frequencies of the electromagnetic spectrum. This means that energy waves emitted by masers move faster than other signals. This speed in itself could increase the message-carrying capacity of a communications system.

Furthermore, a maser beam stays faithfully on a single frequency, whereas radio or microwave beams cover bands of fre-

WHAT OTHERS THINK

quencies. This characteristic of masers makes room for more frequencies, and thus more messages. It also means a lack of interference.

ANOTHER possibility is that masers will permit easier communications between submarines. During World War II, submarines used to talk with each other and convoy ships over light beams (just as some utility emergency crews do), but they could not do it while submerged. Microwave or ordinary radio waves cannot be used for this purpose because they

are absorbed by water as soon as they leave the vessel. Light waves are absorbed by water also, but not so readily. Scientists have found that by using light of certain wave lengths they can transmit maser signals under water for several miles.

These are only some of the myriad applications that scientists are finding for the maser device. They predict that the maser will be put to many more uses in the years ahead, especially in the field of communications where its potential seems to be the greatest.

Modern Rapid Transit for San Francisco

THE growing problem of metropolitan transit, which has affected every large population area in the United States within the last decade, has been especially felt in San Francisco, which, like every other city on the fast-growing West coast, is being buried under a snarled tangle of automobiles.

The problem, for San Francisco, is compounded by the living habits of its citizens, few of whom reside in the city proper. Though the trend to the suburbs can be seen in many cities, it is especially visible in San Francisco where the great majority of people who work within the old city area commute every day, often from substantial distances away.

Many metropolitan areas have initiated studies, reports, agencies, boards, and committees to look into possible means of coping with the transportation problem. San Francisco is one of the few cities which has actually formulated a plan and is taking steps to make it a practical reality.

Frisco's solution to its transportation problem is to build a \$1.36 billion high-speed mass transit network, and, at the same time, to educate its citizens to use

it instead of clogging the highways and bridges with automobiles.

San Francisco's transportation picture is clouded and complicated by its geographical make-up. The city itself is a peninsula jutting out into the Pacific ocean, and is connected to the mainland city across the bay—Oakland—and the peninsula to the north, by three bridges. And though all the components of the San Francisco area are tied together with modern bridges, and interwoven with a network of freeways designed for high-speed vehicular traffic, the city is already groaning under a seemingly endless wave of automobiles which clog the approaches to the city every day.

To solve the problem three engineering companies were hired to conduct a mass transit system planning study which would transport people into Frisco quickly and cheaply, and which would allow them to leave their automobiles out in the suburbs.

A combined monorail-subway-tunnel system was the resultant proposal. Detailed engineering recommendations already have been submitted to directors of

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the five-county district which it would serve. If the supervisors approve, a \$1,077,000,000 bond issue will be submitted to voters of the district next June. If the bond issue is approved, construction would start by January 1, 1964, it would be half completed by 1968, and total completion would be aimed for in 1972.

FARES on the proposed "commuter's paradise" line would be a minimum of 25 cents for any trip of up to eight miles, and as low as 2.25 cents per mile for the longest trips.

Commuters would have to wait no longer than ninety seconds for trains that would carry them in comfort at an average speed—including stops—of nearly 50 miles an hour. Trains would operate automatically, like modern automatic elevators, although passengers would push no buttons themselves. Fare collecting would be simplified by automation, with commuters using cards, much like punching a time clock, and receiving automati-

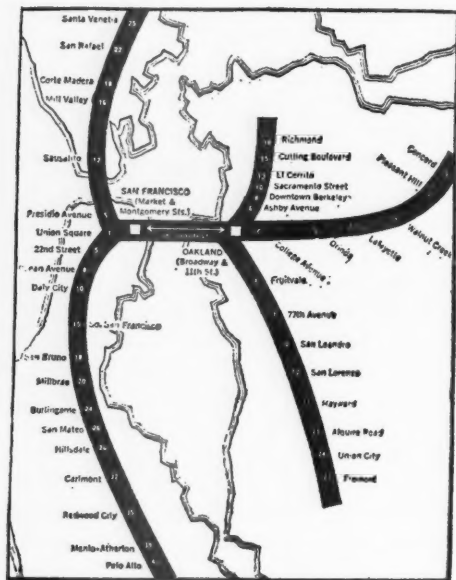
cally figured monthly bills. Cash fares would be taken at turnstiles. The report by the three engineering concerns which conducted the survey, said the system would carry 300,000 comfortably seated passengers per hour in each direction on all routes. The report also said that by 1980 the high-speed network will be carrying 127 million passengers a year and producing net revenue of \$21 million annually. The studies, the engineers said, "demonstrate conclusively" that the system will be self-supporting after tax funds (bonds) build it.

THE district directors are expected to adopt the report. Following the adoption by this group, the recommendations and a previously submitted report on how to finance the 120-mile system will be submitted to the boards of supervisors of the five counties involved—San Francisco, Marin, Alameda, Contra Costa, and San Mateo.

The general obligation bonds, which might mean a tax of as much as 70 cents per \$100 assessed valuation, would build the network, except for a state-financed, \$133 million underwater tube between San Francisco and Oakland. It would be paid for by Bay Bridge tolls.

It has been pointed out that the district tax of 70 cents per \$100 assessed valuation would kill the project in the eyes of the voters who must vote on the bond issue, and it has been suggested that the boards of county supervisors consider starting the tax immediately after vote approval, rather than by waiting until the bonds are actually issued and sold. In this way, the rate might be lowered to around 45 cents per \$100.

Revenue bonds would raise \$149 million for the electric coaches, to be repaid, together with all operating expenses, by commuter fares. The longest haul on the



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rapid transit system would be from Fremont to the southeast of Oakland, to San Francisco, approximately 33 miles, and would take about thirty-five minutes. The fare would run no more than 80 cents.

To the east, the line would run to Concord, thirty-four minutes away by electric

monorail; to the northeast as far as Richmond; to the north on the Marin peninsula, as far as Santa Ventia; and to the south on the San Francisco peninsula to Palo Alto, the home of Stanford University, 30 miles away.

—M. B. P.

Government Telephone Progress in Norway

THE *Farmand*, a Norwegian weekly published in Norway, recently reported that while it has taken a long time for the state to swallow up all the private companies in Norway, it is nearing the end of the road. There are only three private exchanges, and a handful of private city phones left. Of 738,000 telephones in the whole country, only 35,000, or 5 per cent, are now private.

Farmand noted the consequences. In "Telegrafverkets Iangt idsplan for 1962-65," the department's plan for future development, one can read in detail about the state's abuse of control of telephone communications. One hears that the telephone queue has remained the same for ten years.

The latest figures show 44,000 on the waiting list, *Farmand* says, but the department knows very well that the list is really longer, but that people have given up trying. In the "Plans for Development" the situation is described as follows:

A number of applicants for the Oslo exchange have unfortunately been on the waiting list for a very long time. Eight hundred and seventy-three of those on the list on December 31, 1960, are applicants from 1952 or earlier.

"Earlier"—that is as far back as 1940! In other words, in the nineteenth century

it took only three years from the first patenting of the telephone in the United States to the opening of the first private telephone exchange in Norway. But under the Labor party government, eighty years later, *Farmand* says, people are on the waiting list for ten to twenty years without getting a telephone at all; and tens of thousands of others cannot even be bothered applying, because they know it is not any use.

In the meantime, the government is not lacking in plans, according to *Farmand*. In the years 1958-61, 34,000 new phones were to be put into operation in the Oslo area. *Farmand* says the number will fall short by a mere 19,000.

THE "plan" for the whole country was to increase the quota for new phones from 20,000 to 30,000 per year. Instead, the government will now "postpone" its good intentions to the next Four-year Plan, in the period 1962-65. The theory is that if the new plans are successful, the waiting list would then be reduced by 7,500 per year.

But all this does not amount to much. Theoretically, one should get rid of the waiting queue in six years. But the telephone density is barely 20 per one hundred inhabitants in Norway, as against 35 in Sweden; and Norway needs 500,000 new phones to catch up with Sweden.



The March of Events

Eighth Damage Suit Filed

THE government has filed in the U. S. district court in Philadelphia, the eighth in its series of damage suits stemming from the price-fixing conspiracy in the electrical equipment manufacturing industry. The government's complaint, which did not specify the amount of damages, named the following manufacturers of insulators as defendants: General Electric Company, Schenectady, New York; Lapp Insulator Company, LeRoy, New York; I-T-E Circuit Breaker Company, Philadelphia; A. B. Chance Company, Centralia, Missouri; McGraw-Edison, Elgin, Illinois; H. K. Porter Company, Inc., Pittsburgh; Ohio Brass Company, Mansfield; Porcelain Insulator Corporation, Lima, New York; and Joslyn Manufacturing & Supply Company, Chicago.

The government said these nine companies produce and market substantially all the insulators in the U. S. It said that because of the price-fixing conspiracy, the Tennessee Valley Authority and a number of other government purchasers were forced to pay artificially high prices. Attorney General Robert F. Kennedy said specific damages were not cited because the Justice Department has not completed its analysis of government insulator purchases made during the conspiracy.

The government sought triple damages under the Clayton Act for purchases made by TVA.

It sought double damages under the False Claims Act for purchases made by these other government agencies: Interior Department, Army Corps of Engineers, Air Force, and the Marine Corps.

Arizona

Seeks Rate Boost

TUCSON GAS & ELECTRIC COMPANY has asked the state corporation commission for permission to increase its rates about 12 per cent. A spokesman for the company said the proposed rates would provide for a total electric revenue increase of 12.38 per cent and a total gas revenue increase of 11.04 per cent.

The boosts would provide \$807,000 for the gas department and \$2.1 million for the electric department. Total increased revenue would be an estimated \$2.9 million. It was pointed out that this is the first increase requested by the company in its 59-year history. The boost would raise the initial charge from 85 cents to \$1.50 for residential electric service, including

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the first 14 kilowatt-hours. The increase of about 12 per cent does not apply to

customers with over 599 kilowatts demand.

California

Hearing Set in Power Case

THE state public utilities commission set October 9th as the date for a hearing on a controversy between the Sacramento Municipal Utility District and Pacific Gas and Electric Company over electric power charges.

The municipal district filed a complaint with the commission, charging it was overcharged under its contract to purchase electric energy from PG&E. The complaint said a malfunctioning meter resulted in charges being based on 50,000 kilowatts per month, when actually only 47,474 kilowatts were used. PG&E denies there was any overpayment.

The municipal district paid PG&E \$814,532 for power during the period in question, which ran from July, 1960, to April, 1961. The district said this was \$48,097 more than it should have paid.

Plan Nuclear Plant

SAN DIEGO GAS & ELECTRIC COMPANY has announced it will enter into a 20 per cent participation with Southern California Edison Company in the purchase and operation of a nuclear-fueled steam-electric generating plant. The total cost of the plant, including land, will be about \$78 million, making the San Diego firm's cost about \$15.6 million.

The companies are paying about \$10 million for the land and improvements, and about \$68 million for the Westinghouse Electric Corporation reactor and equipment to supply steam to a 375,000-kilowatt turbogenerator, it was reported.

The plant is expected to be in operation by July 1, 1965. It will be located midway between the Southern California Edison and San Diego Gas & Electric load centers.

Colorado

Directors OK Merger

THE merger of two Colorado electric power companies has been approved by their boards of directors in separate meetings, effective about January 1, 1962.

Under the merger agreement, Public Service Company of Colorado will absorb Central Power Company. Public Service President R. T. Person and James W.

Cryder, president of CPC, made the announcement jointly.

A special meeting of shareholders of both companies has been called for November 1st. Officers of the companies were authorized to execute articles of the merger and file an application with the state public utilities commission for approval.

Connecticut

Labor Leaders to Attend Rate Hearings

THE Connecticut State Labor Council, AFL-CIO, said it plans to enter

an appearance before the state public utilities commission on all pending cases involving utility rate increases.

President John J. Driscoll said the

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council "doesn't categorically oppose a rate increase for all utility companies" but "we do insist that the entire financial structure of the company be scrutinized before any increase is considered."

Although the council did not have a personal representative at last month's hearings on a proposed United Illuminating Company rate increase, a letter was sent to the commission outlining its position, Driscoll said. A hearing on proposed Hartford Electric Light rate increases was scheduled to begin September 19th.

Driscoll said it was "the clear intent of the 1961 session of the general assembly that necessary new taxes be distributed among the various economic segments of the community. It would be a wholly unjustified distortion of legislative intent if the utility companies were allowed to shift their share to the consumer."

The utility companies which have asked for rate increases recently have cited an increase in the state public utility tax as one of the reasons for making higher rates necessary.

New Hampshire

Court Backs Commission

A RULING handed down recently by the state supreme court held that the public utilities commission acted properly when it permitted the New England Telephone & Telegraph Company to post a bond to cover a possible reduction in New Hampshire telephone rates. The company earlier was ordered by the commission to show why its rates should not be reduced.

It put up the bond pending settlement of the case. The bond would guarantee payment if the company was ordered to give customers a rebate.

The state attorney general questioned the legality of the action. He contended that telephone rates should be reduced until the case is settled.

The case was scheduled to be resumed on October 2nd.

Pennsylvania

Phone Dialing to Be Strictly Numbers

A N all-number dialing system eliminating dial letters, will go into operation in Pittsburgh by late 1962 or early in 1963, the Bell Telephone Company of

Pennsylvania has announced. One advantage of the new system was said to be the larger print in phone directories, beginning with the 1962-63 edition.

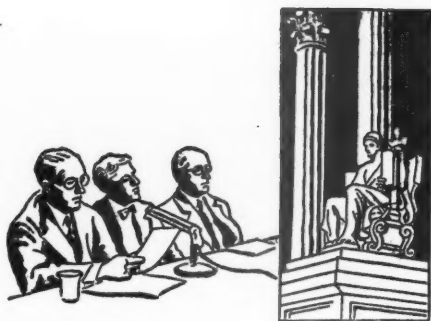
There will be no equipment change involved, Bell officials explained, and no real number change.

Wisconsin

REA Co-op Law Signed

GOVERNOR Nelson signed into law on September 15th a measure recently passed by the legislature to permit REA co-operatives to extend to new premises within annexed areas. Under the previous

law co-operatives were permitted to continue serving customers in newly annexed areas but they were not permitted to expand in newly annexed areas. It is permission for this expansion which was granted by the recently approved statute.



Progress of Regulation

Trends and Topics

Inherent Right of Owner to Sell Property

THE free alienation of property is an inherent right of the owner under our customs, law, and Constitution, subject to restraint only if against the public interest. This statement was made in the recent decision by the Oregon commissioner approving the transfer of part of the operations and properties of a telephone company to another company. The commissioner said that the sale was not subject to denial in the absence of evidence that the rates, service, accommodation, convenience, and safety of the public would be adversely affected or unless it was established by competent evidence that the sale was otherwise contrary to the public interest (39 PUR3d 132). The same opinion was expressed by the commissioner in approving an application by two electric companies for authority to merge (39 PUR3d 142).

In these days, when there is constant opposition to property transfers, consolidations, and mergers, this fundamental right of property owners should not be overlooked. Recognition must, of course, be given to the fact that the corporation laws of various states restrict corporate activities, commissions are authorized to regulate property transfers and impose conditions, and anti-trust laws restrict property transfers which might be deemed objectionable. An example of the application of the general rule that property transfers should not be permitted when evidence of public detriment is produced will be found in the recent decision by the Minnesota commission denying authority to a telephone company to sell its property to another where public detriment was shown (39 PUR3d 152).

The Missouri supreme court, upholding commission orders authorizing the acquisition of stock where the public (consumers) would not be affected by the transfer of the stock, said that the owners of this stock "should have something to say as to whether they can sell it or not." To deny them that right, said the court, would be to deny them an incident important to ownership of property. A property owner should be allowed to sell his property unless it would be detrimental to the public (5 PUR NS 230).

A Maryland court stated the rule that it is not within the province of the commission to insist that the public should be benefited as a condition to

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change of ownership, but its duty is to see that no such change shall be made that would work to the public detriment (100 PUR NS 78).

The Kansas supreme court, upholding the action of a lower court in dismissing an action by a city against the enforcement of an order of the commission approving the sale of electric property, ruled that when the owner of an electric transmission property desires to sell it to another, one who has a contract with the transmission company to generate and sell to it electric energy for a term of years ordinarily will not be heard to complain when the terms of the contract are not interfered with (PUR1931A 307).

Public interest in a property transfer has been considered by many commissions, and in some cases the commissions seem to have proceeded on the theory that there must be public advantage, although not denying the fundamental right to sell property. The decisions mentioned, however, support what would seem to be the American principle that a property owner should be allowed to sell property unless it is to the disadvantage of the public.

Review of Current Cases

Change in Legal Title Terminates Conjunctional Billing Privileges

A NEW YORK court has upheld the decision by the New York commission (36 PUR3d 475) that a consolidated corporation is not entitled to a continuation of conjunctional billing available only to customers receiving such billing at a specified date. Sterling Mortgage Company, Inc., was the owner of record of six one-story buildings and, under a tariff of Consolidated Edison Company, was allowed the privilege of conjunctional billing to "a customer who was taking service" under such tariff "on May 31, 1959."

This corporation was a subsidiary of First Sterling Corporation and was consolidated with its parent corporation in 1960, all of the subsidiary's rights passing by operation of law to the parent.

The utility company, upon learning of the consolidation, refused to render bills for electricity in these buildings on a conjunctional billing basis and began to render them on a separate meter basis, on

the ground that the successor corporation did not come within the terms of the tariff which authorized conjunctional billing. The commission sustained the utility's interpretation of its tariff, and the court was of the opinion that the decision was warranted.

Corporate Succession to Legal Rights

There are cases which hold for a full succession to all legal rights upon a consolidation pursuant to the Stock Corporation Law. These cases, however, do not touch upon the precise problem turning upon the specific language of the utility company's tariff. The court said that as it read the tariff it was not a right of general legal succession that was involved but rather a problem of identity. Conjunctional billing was available "only to" a "customer who" was actually "taking service" on a particular date. The consolidated corporation was unable to bring itself within these words. A "customer

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who" and a different entity which may, by the assignment or succession of right deriving from operation of law, come into the legal rights of such a customer are not the same thing. A status which entitles one to special privileges in preferential rates not shared by the general public may be lost to a successor upon a change of status.

The commission has followed a consistent policy in the interest of public service, as it views that interest, of abolishing and circumscribing extensions of submetering and its resultant conjunctural billing, and limiting them rigidly, a policy which has had judicial sanction. *First Sterling Corp. v Lundy et al.* 217 NYS2d 646.

Change of Title under Agency And Trust Agreements

The New York commission has recently ruled that there was a change of ownership where ownership of property was held pursuant to so-called agency and trust agreements with a man and his sisters as beneficiaries. After the cut-off date he conveyed legal title to himself and his sisters in accordance with their alleged beneficial interests. The commis-

sion upheld the utility's contention that the customer served on a conjunctural billing basis on May 31, 1959, was a group made up of the trustees and that the fact that other persons might have had a beneficial interest in the property was immaterial. *Sandberg et al. v. Consolidated Edison Co. of New York, Inc.* Case 18011, August 8, 1961.

Change from Nominal Ownership to Individuals

In another case a man and his wife joined with three other men to acquire premises in 1951. He and his wife held an undivided one-half interest, and the other men held a one-half interest. At the time of acquisition the group decided that the wife would hold the legal title under her maiden name. She did so until January 30, 1961, when she transferred her one-half share in the premises in which the other men had interests to them as individuals. The commission upheld the contention of the company that there was such a change in ownership as to prevent the continuance of conjunctural billing. *Schrift et al. v Consolidated Edison Co. of New York, Inc.* Cases 18011, 18012, August 8, 1961.



Cost of New Water Mains Capitalized

THE New Jersey commission, in approving a rate increase for a water company, held that the \$590 cost of installing 260 feet of new mains should be capitalized instead of carried as an expense item for the purposes of the rate proceeding. The commission approved the proposed increase from a flat charge of \$2 per month to \$3 per month.

The estimated income statement indi-

cated that for the test year the company would operate at a deficit of \$1,608 but that, at the proposed rates, the deficit would be reduced to \$480. This operating income equated, after the capitalization adjustment, to a rate of return of 1.6 per cent. Such a return, held the commission, was clearly not excessive. *Re Princeton Junction Water Co., Inc.* Docket No. 616-517, August 22, 1961.



Dividends on Equity Capital Calculated in Rate of Return for Gas Company

ON a staff-determined rate base (reproduction cost new less depreciation), the Ohio commission allowed Ohio Fuel Gas Company a rate of return of 5.75 per cent. The company sought a return of 6.75 per cent, allowing a return of 10 per cent on equity capital. After the payment of all operating expenses, depreciation charges, taxes, and hypothetical interest expense, the allowed return will enable the company to pay a dividend of 6 per cent on the equity portion of the statutory rate base at a payout ratio of 77 per cent. The rate increase granted was about 6.2 per cent as compared with the requested increase of 24 per cent.

In computing the federal income tax, the staff used hypothetical interest based upon the applicant's capital structure consisting of 49 per cent debt and 51 per cent equity. The commission thought, however, that a capital structure consisting of approximately 55 per cent debt and 45 per cent equity was more appropriate in this case. The latter capital structure approximates that of the applicant's parent company.

The company objected to the report of the commission secretary with respect

to the allowed depreciation expense and the treatment of accelerated depreciation for federal income tax purposes allowing the tax savings to "flow through." As to the latter objection, the commission noted that its policy has been set forth in the Cincinnati Gas & Electric case (33 PUR3d 1). It continues its policy of passing on to consumers the tax benefits of accelerated depreciation. In support of its other objection, the company took the position that depreciation accruals should be based on the statutory rate base. The commission recognized no support for this position.

Dissent Urges Tax Normalization

Commissioner Krueger, dissenting, expressed the opinion that the majority's adoption of the "flow-through" or actual-tax method will cause utility management to revert to straight-line depreciation for tax purposes and thereby deprive both ratepayers and utilities of all benefits accruing from the use of accelerated depreciation. He would normalize taxes, treating the tax savings as interest-free funds in determining the fair rate of return. *Re Ohio Fuel Gas Co. No. 28,768, August 10, 1961.*



Fair Value Rate Base Redetermined on Remand And Gas Rate Increase Authorized

UPON remand from the state supreme court (38 PUR3d 469), the North Carolina commission redetermined the fair value rate base of Piedmont Natural Gas Company, Inc., which began this rate increase proceeding in 1959. The evidence indicated an average net original cost of the company's properties of \$17 million. Net property value at the end of

the test period was \$19.6 million, and trended original cost amounted to \$31.5 million. During the year ending October 31, 1959, the company's investment in North Carolina plant increased about \$3 million, or 19 per cent. It is a fast-growing company. No evidence was offered as to reconstruction cost new or present-day values by visual appraisal.

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Trended Cost

The commission expressed the opinion that trended cost does not reflect as accurately the true value as does construction new or visual appraisal. Much of the company's plant has been installed since 1951, and nearly a fifth of it was installed in 1959. The commission concluded that neither end-of-the-period net cost nor average net cost reflected fair value.

Nor could trended cost be taken as fair value. In these circumstances the commission fixed \$20.3 million as the fair value of the company's property. In the

commission's original decision it fixed fair value at \$18.4 million.

Rate of Return

A rate of return of 6.11 per cent on this rate base was considered reasonable and fair. After operating expenses, including cost of gas, this will cover fixed charges 1.97 times and permit historic dividend payments to be continued, besides allowing for a transfer to surplus. Equity earnings will amount to 10.33 per cent. Refunds were ordered. *Re Piedmont Nat. Gas Co., Inc. Docket No. G-9, Sub 33, August 11, 1961.*



Adjudication of Creditor Rights

THE California supreme court annulled a commission order which authorized the transfer of highway operating rights upon condition that specified creditors of the transferring utilities be given preferential treatment in the payment of their claims.

The court pointed out that the commission had not been given the power to adjudicate the rights between a public utility subject to its regulatory powers and general creditors or those asserting contract rights. By the condition which the commission had imposed upon its approval of the transfer, it had sought to give priority to certain classes of claims in the dispersion of the purchase price

to be paid over all other creditors of the transferring corporations. General jurisdiction to determine the respective rights of creditors where an assignment for the benefit of creditors has been made, the court said, reposes in the superior court.

The court could find no theory under which the commission had acquired such jurisdiction.

In cognate situations, the court had held that the commission had no jurisdiction to adjudicate contract rights asserted by third persons against a utility, but that the proper forum for such adjudication was the superior court. *Hempy v California Pub. Utilities Commission, 14 Cal Rptr 436.*



Telephone Company Permitted to Continue Furnishing Private-systems Service

THE Ohio commission dismissed a complaint by Mid-America Telephone Company seeking an order to require The Ohio Bell Telephone Company to discontinue furnishing private-systems telephone service. It was held to be a

communication service and, as offered by Ohio Bell under a filed tariff, a utility service subject to regulation by the commission.

The commission observed that such service can be rendered effectively by a

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telephone company by virtue of the interrelation with the type of public utility services rendered by such a utility. It was also noted that the public can demand the private-systems service as a matter of right by virtue of the filed tariff. Furthermore, the regulated offering of this service by a utility does not preclude unregulated competitive enterprise from entering the private communications business and furnishing a competitive service. In view of these circumstances, the commission concluded that it is in the interest of the subscribing public that Ohio Bell be permitted to continue rendering private-systems service under its filed tariff.

Consent Decree Inapplicable

Alleging that Ohio Bell is prohibited from furnishing private-systems service, the complainant cited a federal consent decree entered in *United States v Western Electric Company et al.*, Civil Action

17,49, January 24, 1956. The decree enjoined American Telephone and Telegraph Company, of which Ohio Bell is a wholly owned operating subsidiary, from engaging "... in any business other than the furnishing of common carrier communication services. ..." The latter services are defined in the final judgment to include any communication services or facilities, the charges for which are "... subject to regulation under the laws of the jurisdiction (state or territory of the United States or the District of Columbia) in which the service or facility is furnished."

There would appear to be nothing in the consent decree, said the commission, which precludes Ohio Bell from engaging in the furnishing of communication services subject to the regulation of the commission. *Mid-America Teleph. Co. v Ohio Bell Teleph. Co. Case No. 27,928, August 9, 1961.*



Intervener Status of State Commission in FPC Gas Case Upheld

THE United States court of appeals for the District of Columbia circuit denied rehearing of its order of June 15, 1961 [see 68 PUBLIC UTILITIES FORTNIGHTLY 353 (August 31, 1961)], which reversed and remanded Federal Power Commission orders denying intervention by the New York state commission in certificate proceedings under the Natural Gas Act.

The court, however, held that the New York commission was entitled to intervenor status on the filing of a notice of intervention.

In its petition for rehearing the Federal Power Commission argued that it was not required to comply with § 1.8 of its Rules of Practice and Procedure, and that it "is not a slave to its own rules." The court

conceded that an administrative agency may waive certain of its procedural rules, and that in some cases rules of procedure have been held in some circumstances not binding upon the agency. In this case, however, the court believed that the commission did not decide not to apply a procedural rule but that it decided the rule with which the state commission complied did not govern its intervention rights, quite a different thing.

The court decided that the commission held that under its rules the New York commission did not acquire intervenor status by filing notice of intervention. In this, the court concluded that the Federal Power Commission was mistaken. The court held that the Federal Power Commission may not leave in effect § 1.8 and

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at the same time deny the state commission the status the rule gives such a commission which complies with it. It observed that no bad faith was suggested as attributable to the state commission in intervening in these proceedings in the

fulfillment of its own responsibilities to consumers in New York state, nor was there any suggestion of abuse. *New York Pub. Service Commission v Federal Power Commission*, Nos. 15366, 15854, 15910, August 3, 1961.



Annexation or Not, Commission Has Initial Jurisdiction

THE Pennsylvania supreme court affirmed a lower court holding that a borough did not have the exclusive right to sell electricity in an area recently annexed but presently served by a certificated electric company. A utility which has been granted a certificate of public convenience by the commission for the rendition of electric service in an area may not, without prior approval of the commission, be required by decree of the court of common pleas to abandon or surrender that service because the area was recently annexed by a borough.

It was unquestioned that the commission had exclusive and comprehensive regulatory jurisdiction over the electric company's activities. On the other hand, it was readily acknowledged that a borough, to the exclusion of the commission, has jurisdiction over its own electric service when confined within the borough's boundaries. In fact, the borough code prohibited the introduction of current into the borough without the consent of borough authorities. The commission, however, had jurisdiction over any portion of the borough's service which extended beyond the limits of the borough.

No Court Adjudication

Although the court still possessed the right of judicial scrutiny over the acts of the commission, it stated that the prin-

ciple had become firmly established that the courts would not originally adjudicate matters within the jurisdiction of the commission. Initial jurisdiction in matters concerning the relationship between public utilities and the public rests in the commission, not in the courts. It had been so held in cases involving rates, service, rules of service, extension and expansion, hazards to public safety due to use of utility facilities, location of utility facilities, obtaining, alerting, dissolving, abandoning, selling, or transferring any right, power, privilege, service, franchise, or property and rights to serve particular territory.

The enabling statute requires a certificate to be obtained before any utility could dissolve, abandon, or surrender, in whole or in part, any service or transfer by any method whatsoever any tangible or intangible property used in the public service. Nevertheless, the borough desired a court to determine initially whether the company had to abandon or sell its rights or discontinue its already obtained franchise privilege to render service in this newly annexed area.

The courts do not possess the jurisdiction to make such a determination. The borough can effectuate its purpose only by initially proceeding before the commission. *Borough of Lansdale v Philadelphia Electric Co. et al.* 170 A2d 565.



Freedom from Competition Must Yield to Public Convenience

THE Pennsylvania superior court, over the objection of Railway Express Agency, Incorporated, sustained an order of the commission authorizing United Parcel Service, Inc., to engage as a class D common carrier by truck in the carriage of small parcel traffic to and from all points in the eighteen eastern counties of Pennsylvania designated in the application. It was said to be the duty of the commission to determine whether or not the grant of the certificate was necessary or proper for the service, accommodation, convenience, or safety of the public. The order would not be vacated or set aside except for error of law or lack of evidence to support the findings, determination, or order of the commission, or a violation of constitutional rights.

Public Need for Special Service

Protests had been filed against the application by eighty-two carriers, including Railway Express Agency, Inc., which appealed from the decision, although a substantial number withdrew their protests. United Parcel is one of a number of operating companies controlled by United Parcel Service of America, Inc. The service is designed to handle large volumes of small packages in a faster, more efficient manner than United States parcel post service, at a cost competitive with uninsured parcel post. The operation is so designed that every package picked up at any point in the eighteen counties may easily be delivered, the day following pickups, to a point within the territory.

The commission, said the court, properly concluded that there was a public need for the proposed service that was not being met by Railway Express or any

other existing common carrier. It recognized that increased competition for the small parcel business might affect other small parcel carriers, but in the exercise of its administrative discretion the commission concluded that the compelling public need for service, such as was proposed, must outweigh these considerations.

The commission has power "to authorize competition where it is necessary to provide adequate service."

A contention that the service would not be operated at a profit was rejected. This argument was based upon a comparison of estimated figures of annual expenses and the mathematical bearing these figures would have in relation to the volume of packages which United Parcel estimated it would be receiving in the first year of operation. It was said to be obvious that this was not a fair test, as expenses are unusually high in the establishment of a new business and the volume low. It is necessary to take into account the leveling of such expenses and increasing volume with the passage of time.

No Value Limitation

A contention that a value limitation was necessary to prevent the cream of the business from going to the new carrier under the order was held to be without merit. The problem was said to be one of administrative discretion, and the commission had pointed out that there had never been such a limitation placed in a motor carrier's certificate. It would be almost impossible for the commission properly to police such a limitation, and the failure of proper enforcement would result in all kinds of chicanery to avoid or disregard the value limitation.

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Question of Dual Operations

The court agreed with the commission's conclusion that a statutory restriction against dual operations as a common carrier and a contract carrier had no application in this case. The applicant is a New York corporation which has conducted common carrier service similar to the one proposed in New York city. The corporate applicant was not conducting any other type of operation in Pennsylvania. Its service in Pennsylvania was entirely distinct and physically separate from that performed in New York.

United Parcel Service of Pennsylvania, Inc., is a related company performing a

retail store delivery service as a contract carrier for named stores in the Philadelphia and Pittsburgh area. The order in the present case contained a restriction against service for retail stores generally. This service was said to be a completely separate operation.

Although it is clear that the statute forbids operations as a contract and common carrier, said the court, it does not prevent the same person or entity from being engaged in one line of business as a common carrier and another as a contract carrier. *Railway Express Agency, Inc. v Pennsylvania Pub. Utility Commission*, 171 A2d 860.



Transcontinental Air Freight Service Properly Uses Feeder Trucks to Landing Points

A FEDERAL appeals court affirmed a Civil Aeronautics Board order which authorized an air freight carrier serving Philadelphia to operate through the Newark airport, using trucks to transport Philadelphia freight to and from Newark. The certificate of the carrier, the Flying Tiger Line, Inc., authorizes the transportation of freight between the Pacific coast, various intermediate points including Philadelphia, and Portland, Maine. It was further authorized to use any airport convenient to these points.

For several years Flying Tiger operated large aircraft between the East and West coasts, using smaller feeder planes for freight destined to or picked up at intermediate points such as Philadelphia. But the company suffered financial loss in its transcontinental operations with feeder planes. In 1957 it filed a proposal to provide larger, faster aircraft on its main route, and to eliminate the feeder planes in favor of truck deliveries between the landing places of the larger planes and the intermediate points. Under

this proposal, temporarily authorized, service was speeded up and improved. Trucks operate the 90 miles between Philadelphia and the Newark airport, which, as a transcontinental landing point, serves Philadelphia.

Adequate Indirect Service

Shippers were pleased with the improved service, but the city of Philadelphia raised the question whether the truck service to Philadelphia constituted adequate air service within the meaning of Flying Tiger's certificate. Upon the board's determination that it was adequate air service, and not adverse to the public interest, Philadelphia sought review.

Philadelphia also contended that this service was not direct air service to Philadelphia. However, service to Philadelphia through the airport nearest to the city is not required by the airline's certificate. Only "any airport convenient thereto" is required. The word "direct" does not appear in the certificate. The improved serv-

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ice and the satisfaction of shippers indicated that the Newark airport is convenient to Philadelphia. The court thought the city's opposition was based on the admission of its counsel that "Our pride has been hurt."

Trucking Is Air Transportation

On other questions raised by Philadelphia, the court held that the West coast-Newark-Philadelphia movement of freight constitutes air transportation within the meaning of the Federal Aviation Act, notwithstanding the adjunct truck service. Nor did the board exceed its authority in authorizing such truck

movements without a certificate of exemption from the Interstate Commerce Commission. The truck transportation was held to be air transportation as to Flying Tiger, though no attempt was made in this case to determine the status of the truck operation under the Interstate Commerce Act. If the Interstate Commerce Commission should later conclude that the truck operation is not exempt under the Interstate Commerce Act, then the trucker will have to obtain the requisite authority in order for Flying Tiger to continue its new plan of service. *City of Philadelphia v Civil Aeronautics Board*, 289 F2d 770.



Water Service by Property Owners' Association Held to Be Public Utility

THE New Jersey board held that a water system operated by Brookwood Musconetcong River Property Owners' Association and serving only association members is a water public utility subject to the jurisdiction of the board. The utility was ordered to comply with the applicable statute and the board's rules and regulations.

Two conditions are required in order to bring the operator of a water system under the jurisdiction of the board: (1) that the system is for public use; and (2) that the system is operated under privileges granted by the state or a political subdivision thereof. The operator of the water system in this case contended that it was a "neighborhood association" supplying only its members and not the public. Some residents in the Brookwood Musconetcong river area were not members of the association and were not receiving water service from the association. At least one such nonmember resident requested water service and was refused. The sales agreement used by the

developer of the area provided that the seller was not obligated to lay water mains or provide a water supply to the lots in the tract.

Because of the broad requirements for membership, the board could not consider the association a private, limited-membership association, and it therefore concluded that the water supply system was a public supply. Municipal consents to the operation of this water system and the use of dedicated streets for that purpose were implied in agreements recognizing the existence of the water supply system by municipalities concerned. A map showing the Brookwood Estates and delineating streets in which mains would be placed had been filed with the county clerk. It is settled law in New Jersey, the board observed, that the filing of a map laying out streets in a tract and the sale of lots abutting on such streets constitute an irrevocable dedication to public use. *Lewandowski et al. v Brookwood Musconetcong River Corp. et al.* Docket No. 609-634, August 3, 1961.

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Pay TV Coming to Little Rock Despite Objections by Movie Theaters

MIDWEST VIDEO CORPORATION, proposing to provide pay television in the city of Little Rock, obtained an order from the Arkansas commission directing Southwestern Bell Telephone Company, Inc., to furnish a coaxial cable distribution network. The telephone company was willing and able to provide this service and merely required a commission determination that it would be in the public interest for it to do so.

Observing that telephone poles were already in place, on which to hang the necessary cables, the commission indicated that it would be wasteful and contrary to the public interest for the television company to have to duplicate such facilities. The telephone company is the proper utility to provide the service. Since the record showed that the television company's operations would be wholly within the city of Little Rock, there was no serious question as to the jurisdiction of the state commission to entertain the complaint.

Telephone Company Rates

The tariff submitted by the telephone company provided for a customer deposit, or other adequate security, in the amount of construction charges which the telephone company would incur. This, coupled with a ten-year termination provision, which reduces by 1/120 each month, would safeguard the telephone company's investment and protect telephone subscribers in the event the television project should fail or the service be prematurely terminated.

The tariff provided for a monthly charge of \$2,000 and a \$68,000 ten-year termination charge for the first ten route miles of distribution facilities, including amplifiers, channelizing equipment, and

test equipment, plus a monthly charge of \$28 and a termination charge of \$885 for each additional one-quarter mile thereafter. A \$20 construction charge and a 35-cent monthly charge would also be required for each channel terminal.

In developing these rates, the telephone company prepared an outline of a cable distribution system for the Little Rock area to be served. From this outline there was computed the new items of construction material that would be needed, together with the existing quantities of telephone plant which would be used.

On the basis of this information the cost of the project was ascertained. It was estimated that the investment required for the complete system would total \$267,000, and that the annual revenue requirement would be \$99,000. From these figures the rates were computed. The commission found the telephone company's proposed rates fair and reasonable.

Competition with Movie Houses

Movie theater owners in Little Rock intervened and argued that pay television would not be in the public interest. They contended that there is already a shortage of motion pictures available for showing in their theaters, and they predicted that pay television would outbid for these pictures, with the result that the theaters would be closed. It was urged, moreover, that programs now being produced on free television would be transferred to the new medium and that the public would end up paying for what they now see free.

Midwest Video contended, on the other hand, that pay television would bring more and better television to Arkansas and that it could be furnished at a rea-

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sonable price. The company claimed the right to have its product valued in the competitive market place.

In ruling in favor of Midwest Video, the commission indicated that it could not deny the people of Arkansas the benefits of a new entertainment medium

merely because other segments of the industry may be competitively inconvenienced thereby. Any new invention, it was pointed out, is likely to lead to economic change. *Midwest Video Corp. v Southwestern Bell Teleph. Co., Inc. Docket No. U-1582, July 28, 1961.*



Labor Dispute No Justification for Certificate Grant to Third Party

THE Nevada commission denied a taxicab company's application for a temporary certificate to provide service in an area where the carriers previously serving the public were embroiled in a labor dispute. The dispute had left the union and the operators without a labor contract, and the applicant, during the initial period when the regular carriers had been idle, had provided a form of public taxicab transportation by "courtesy cars," which were owned by drivers who were also members of the union as well as stockholders in applicant's company. There was no question of unauthorized prior transportation by virtue of the arrangement, since a prior attorney general's opinion had stated that a certificate was not required unless compensation was received for providing the service. The evidence showed that the courtesy cabs did not, as such, charge fares but would receive gratuitous tips from the recipients of the service.

No Emergency

The commission, after examining the evidence, concluded that the emergency

alleged by the applicant as the basis for granting the application did not in fact exist. In addition, the commission did not feel that it was cricket to grant operating authority to third parties during the pendency of a labor dispute.

If a third party were given such authority, the commission pointed out, it would prove detrimental to the parties involved in the labor dispute. The Nevada legislature had never given the commission such a power.

The right of collective bargaining is a legal and democratic concept which the commission is bound to observe. In the instant case, a third-party corporation had asked the commission to grant it the authority to operate while the normal procedures of collective bargaining were in process. If such authority were granted permanently or temporarily, the union would lose its power to bargain and the carriers would lose their businesses. Both labor and management would therefore be irreparably damaged and the concept of free collective bargaining would be destroyed. *Re Silver State Cab Co. CPC A 847, August 16, 1961.*



Passenger Train Discontinuance Just Desert For Air and Auto Conscious Public

THE Maine commission granted the Bangor and Aroostook Railroad per-

mission to discontinue all passenger train service. In a previous order, the commis-

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sion had required continuation of one round trip per day for at least a year to see if the public responded accordingly. The traveling public had been admonished that it must demonstrate its need for the service with reasonable patronage during the test period.

Such had not been the case. Patronage had continued to decline and the out-of-pocket losses had continued. Under such circumstances, the commission had no alternative but to find that present and future public convenience and necessity no longer required operation of the trains.

Test of "Public Interest"

The commission cited, as governing precedent, the Maine Central Railroad case (36 PUR3d 12), in which the Maine supreme judicial court had stated that railroads could regard carriage of passengers as an intolerable and oppressive financial burden, in view of the revolution which had occurred in methods of transportation. The obvious preference of most of the traveling public for the automobile and the airplane had produced an astonishingly rapid increase in their use, with a correspondingly sharp decline in the use of passenger trains.

In respect to the test of protecting the public interest, the court had said that it was not merely concerned with that segment of the public which might actually use the trains for passenger travel. It

was the interest and the necessities of the whole public which had to control the ultimate decision.

With regard to the whole public, the commission pointed out that the railroad had to be maintained in a position to continue to render efficient freight service to the area involved. The court had again made its position clear, in the above-cited cases, when it had spoken of the very real need which the whole public had for an efficient freight service by rail. There were many raw materials and products of great weight and bulk which could only be carried efficiently in and out of the state in freight cars.

Maine is somewhat remote from the principal markets and thus dependent on fast and economical transportation of goods. It is engaged in spirited competition with sister states for new industry which would add to payrolls and taxes and assure the economic health of the state.

Moreover, existing established industry has to be encouraged and preserved and agriculture is not to be deprived of indispensable freight service. That is the underlying reason for dealing with the public interest in its broad sense. Every citizen of the state has a stake in the industrial and economic vitality of his state. *Re Bangor & Aroostook R. Co. R. R. No. 3482, FC No. 1531, August 30, 1961.*



Express Freight Authority Granted Railroad Turned Motor Carrier

THE Bangor and Aroostook Railroad, which had previously been granted a certificate authorizing the transportation of passengers by motor vehicle between points formerly served by rail, applied to the Maine commission for authority to transport baggage, mail, and

express in the same vehicles over the same routes.

It was apparent to the commission that the service proposed was not equivalent to the service of a motor common carrier of general commodities. Substantially all of the potential traffic which might be

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attracted to the applicant's service would move on rates considerably higher than those maintained by motor common carriers of general freight.

The applicant was not capable of meeting shippers' general requirements. It would not provide a pick-up and delivery service, a most important feature of the general motor carriers which had protested. In addition, the applicant was further handicapped by the fact that it operated over specified routes in the territories, a factor which militated against the provision of a complete service.

Therefore, the commission concluded that the applicant's competitive impact, because of service limitations and rate levels, would be extremely limited. The express service primarily involved the expedited transportation of small shipments, many of an emergency nature at generally higher rates. The commission was convinced that public convenience and necessity had been shown for the type of service proposed.

In the Public Interest

The burden of proof upon the appli-

cant, however, was to show something more than mere public convenience and necessity. The interpretation of the term "in the public interest," the commission pointed out, was somewhat broader than "public convenience and necessity." The commission was not merely concerned with that segment of the public which might actually use the service. It was the interest and necessities of the whole public which had to control the ultimate decision. The granting of the application, the commission noted, would make available to the applicant an additional source of revenue which would unquestionably have a sustaining effect upon its passenger operations, and would come within the interpretation of the phrase "in the public interest." The authority granted was limited as to weight, size, and bulk, so that the comfort and convenience of passengers would not be disturbed. In the commission's opinion, public interest also required that all common carriers of passengers be authorized to transport mail and to transport passenger baggage. *Re Bangor & A. R. Co. B No. 13, August 30, 1961.*

Other Recent Rulings

Harmless Error. The U. S. court of appeals affirmed the FCC's denial of an application for permission to move the location of a television transmitter, commenting that the "harmless error" rule applied to administrative determinations made on a full record. *Triangle Publication, Inc. v Federal Communications Commission*, 291 F2d 342.

Reliance upon Subordinates. The U. S. court of appeals held that the Civil Aeronautics Board is not precluded from rely-

ing upon subordinates to shift the record, advise as to the contents, and prepare a draft of findings and an opinion for the board's consideration. *Great Lakes Airlines, Inc. et al. v Civil Aeronautics Board*, 291 F2d 354.

Packing House Products Only. The U. S. district court held that the fact that a motor carrier published rates on soap and related commodities without indicating in its tariff the limitations upon the movements of such commodities imposed

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by the commodity description in its certificate did not enable it to carry commodities which in fact were not "packing house products" produced or distributed by a meat packing house. *Morehouse v United States et al.* 194 F Supp 940.

Unfair Competition. The U. S. district court held that the ICC had justifiably found a railroad's tariff providing for reduced commodity rates to shippers agreeing to move a certain percentage of their traffic over the railroad was an unfair or destructive competitive practice under the National Transportation Policy. *New York C. R. Co. v United States*, 194 F Supp 947.

Highway Common Carrier. The California supreme court held that a carrier which operates regularly between fixed termini and holds itself out to serve the public generally is a highway common carrier although a portion of its business may be with shippers with whom it has contracts. *Talsky et al. v California Pub. Utilities Commission et al.* 14 Cal Rptr 325.

Certificate Construction. The Texas court of civil appeals held that the terms "farms" and "ranchers," used in a certificate authorizing the motor carriage of water pipes from farms and ranches within a radius of a certain distance from a city to points within a greater radius or vice versa, did not permit industrial transportation from a pipe supply house to industry, since the words were used in the ordinary sense. *Blair v Texas*, 348 SW2d 54.

Water Rate of Return. The Wisconsin commission authorized a municipal water plant to increase rates sufficiently to provide a rate of return of 6 per cent on a

net book value rate base. *Re City of Wausau*, 2-U-5585, June 30, 1961.

Water Utility Status. The Missouri commission ruled that a land development corporation furnishing water to resident householders of the development organization was not a public utility subject to its jurisdiction, since the development area was exclusive and there was no holding out to serve the public. *Re Lake Montowese Develop. Co., Inc.* Case No. 14,682, July 12, 1961.

Mandatory Additions to Rate Base. Mandatory additions to the plant of a water company, required in order to bring service up to proper quality standards, were, by the New Jersey board, included in the rate base where such additions, already begun, would be completed during the current year following the test period. *Re Sparta Mountain Water Co.* Docket No. 611-65, July 18, 1961.

Supply Factor in Certificate Case. Upon application by a gas company for authority to serve a new area with gas which it proposed to obtain from a pipeline, the Missouri commission refused to deny a certificate on the mere ground that other companies which might later desire additional supplies from the same pipeline would be obliged, at some expense to them, to protest a supply of gas for the applicant before the Federal Power Commission. *Re Midwest Missouri Gas Co.* Case No. 14,574, July 27, 1961.

Party to Sale Proceeding. The Massachusetts supreme court held that the prospective purchaser of a terminal station was not an indispensable party to a proceeding by a terminal company for approval of a sale of the station, in view of the fact that the company would con-

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tinue to operate the terminal facilities and no authority was being transferred to the purchaser to take over the operations. *Attorney General et al. v Massachusetts Dept. of Pub. Utilities*, 175 NE2d 255.

Return Not Unreasonable. The Wisconsin commission did not consider a return of 3.7 per cent on a telephone company's net book value rate base unreasonable. *Re Frederic Teleph. Co. 2-U-5573*, July 28, 1961.

Return Not Excessive. The Wisconsin commission held that a 3.5 per cent return on the net book value rate base of an REA-financed telephone company was not excessive in so far as subscribers were concerned. *Re Mosel-Centerville Teleph. Co. 2-U-5577*, July 28, 1961.

Loss Not Allowed as Expense. In a telephone rate case the Ohio commission denied as improper an expense claim for a loss incurred in the sale of central office equipment. *Re Mansfield Teleph. Co. No. 28,743*, August 9, 1961.

Dial Service Rate Increase. Upon converting to dial service a small telephone company was authorized by the Ohio commission to apply a rate of 75 cents per main station per month in excess of the rate levels for common battery service. *Re Delta Home Teleph. Co. No. 29,524*, August 11, 1961.

Complaint Dismissed. A complaint by a citizens' association against a telephone company was dismissed by the California commission for failure to state a cause of action where the pleadings related to matters that properly could be the subject of consideration only in the context

of rate proceedings, or to matters that could not be considered in a proceeding involving but one or two utilities, or to matters beyond the jurisdiction of the commission, or to matters of legislation rather than regulation, or to matters that clearly could not be violations of law. *Utility Users League et al. v Pacific Teleph. & Teleg. Co. et al. Decision No. 62442*, Case No. 7076, August 22, 1961.

Municipal Water Plant Return. The Wisconsin commission considered a return of 5.5 per cent on a municipal water plant's net book value rate base reasonable. *Re Village of Bloomington, 2-U-5576*, July 27, 1961.

Need, Not Desire, Controlling. The Colorado commission, in denying a motor freight certificate application, pointed out that shipper desire for a certain type of service is not sufficient to justify the grant of a certificate, in the absence of a public need for such service. *Re Denver-Climax Truck Line, Inc. Application No. 18483*, Decision No. 57032, August 16, 1961.

Municipal Water and Sewer Plant Return. The Wisconsin commission considered a return of 5.5 per cent on a municipal water and sewer plant's net book value rate base reasonable. *Re City of Augusta, 2-U-5581*, August 17, 1961.

Student Transportation. The Wisconsin commission, in a declaratory judgment, held that proposed transportation of schoolchildren by bus under individual contracts with their parents between their homes and the parochial and public schools was not common motor carriage subject to its jurisdiction. *Re Ehlenfeldt, DR-21*, August 17, 1961.

The Telephone Industry Goes to Market

These following statements from individual executives and other officials of Bell System and independent telephone companies all over the United States show the resolution of the operating industry management to move aggressively into the market place for the sale of new and other services to the telephone using public.

FRANCIS X. WELCH, *Editor*

Two years ago, on the occasion of the 64th annual convention of the United States Independent Telephone Association, PUBLIC UTILITIES FORTNIGHTLY embarked upon a rather uneditorial feature. This was to give to its readers a representative collection of individual statements of company officials which would show special interest to other telephone company people as well as to utility and regulatory authorities. Since that time, this feature has been in popularity.

This year, as in former years, these statements have been collected and printed in this special issue which is distributed about the time the AEA meets in Chicago for its 64th annual convention. This compendium lists a number of aspects of interest to telephone business. The Bell System, for example, is obviously giving much attention to new services such as Data-Phone and Data-Pak. Wide area telephone service (WATS) and Telpak are also among recently available new services being aggressively promoted. But, of course, the glamor feature in this issue is the space communications satellite proposal still pending with the FCC and the powers that be in Washington,

The challenge of new ways of doing old business as well as new business of a type never done before is further strikingly illustrated in the excellent statement from the chief executive officer of the largest of the independent groups—the General Telephone companies.

Throughout the balance of the statements we also note a persistent tone of preoccupation with future as well as present problems and a healthful conviction about the promise which lies just over the horizon. It is clear that the telephone industry, no matter what the doctrinaire economists may say about "monopoly," is very much in a competitive market with respect to new services and new techniques.

Some of the companies are offering cash awards to employees for the best selling jobs. Some are increasing the tempo of their marketing programs according to pre-ordained schedules with target objectives. Some are looking ahead to new construction as an integral part of their system within the coming year. By the same token, much attention is being given to budgeting. A number of companies have reached the golden objectives of 100 per cent dial conversion and others are so near that it is a matter

of virtually reaching the happy day. And there are the money markets to be considered, always so vital in the area of new financing for needed plant building and expansion. There are, of course, the special difficulties of these companies faced with dynamic growth of explosive proportions, such as in Florida and California. There are always the practical bread-and-butter problems of obtaining adequate revenues and bringing about operating economies which will permit the industry to make ends meet, regardless of increasing demands, and constantly more expensive service facilities.

Some companies are giving emphasis to employee stock purchase plans. Employees are also being assigned special roles in aggressive merchandising programs.

On the whole, it would appear that the telephone companies have packaged and are displaying their wares very well indeed in competition with other industry for the consumer's dollar. They are no longer content to be order-takers or beneficiaries of a captive "monopoly" patronage. They are going out and drumming up business and they are succeeding. Clearly the telephone companies are going to market.

The Telephone Business—A Look Ahead

WELLINGTON POWELL

Vice President, American Telephone & Telegraph Company

ALTHOUGH public discussion of space satellite communications has tended to obscure the fact that the nation's telephone industry has been mightily busy on other fronts in the business.

Words like "variety" and "diversity" are heard continually in the offices of telephone planners across the country, and with good reason. Never before have telephone customers been able to command such a

wealth of communications services. And not only are new products and services on the planning boards—new ways of using existing facilities and equipment are being developed, toward the goal of making telephone

and all communications services more useful than ever.

In the forefront of any discussion of new communications tools these days is the field of data processing and transmission. AT&T chairman Frederick R. Kappel has said that "perhaps within fifteen years or so, the volume of information communicated between machines may be even greater than the amount of communications between people."

With this in mind, the Bell system has embarked on an extensive program in the data field. One of the most interesting developments has been Data-Phone service, a swift and versatile new communications service.

The Data-Phone

Since its initial development by the Bell Telephone Laboratories in 1958, Data-Phone service has given promise of being a very remarkable and far-reaching contribution to the art of communications. Now, as Data-Phone service enters market development, that promise is coming true.

Through its rapidly expanding use by all types of business, Data-Phone service is bringing greater efficiency and substantial savings to Bell customers.

Linking various locations together over regular telephone lines, Data-Phone service enables business machines to talk with each other in much the same way that humans do, but at speeds in excess of 2,000 words per minute. Now, business machines can instantly receive, process and store information transmitted via Data-Phone data sets from other machines. Connections are put through as simple telephone calls. Data-Phone data sets convert the signals from business machines into a form which is sent quickly and inexpensively over the regular telephone network.

In the first two-and-a-half years, that Data-Phone service has been available on a limited basis, more than 1,300 installations have been made. In 1961, a total of about 3,000 Data-Phone sets are expected to be in use and the forecasts indicate more than ten times that many by 1965.

The largest Data-Phone installation of its kind to date was completed early this year for the Hardware Mutuals — Sentry Life insurance group. There, 36 Data-Phone data sets speed the transmission of data from the company's 32 branch offices to its new data processing center in Stevens Point, Wisconsin. While enabling the company to provide faster and better service to its customers,

Hardware Mutuals says Data-Phone service is actually saving more than \$1 million in operating costs.

Firestone Tire and Rubber was one of the first to establish a Data-Phone network of major importance. It installed Data-Phone data sets in October, 1958, to handle the transmission of payroll and other accounting data.

Any type of data in any machine language—including handwriting and diagrams—can be transmitted by Data-Phone service at low or high speeds, from and to any place in the country where there is a standard telephone. This makes Data-Phone especially useful in handling accounting and billing information, invoices, inventories, sales orders, payrolls and other forms of business data.

For example, using a Data-Phone data set, a big supermarket's entire inventory of some 7,000 items can be sent in about eight minutes. The same list in printed tabular form (single-spaced) would be about 100 feet long and take hours to read over the telephone.

In a typical system, compact Bell system Data-Phone data sets are placed between the business machine and the telephone at both the sending and receiving locations. These locations could be next door or at opposite ends of the nation. Data is transmitted from one machine to another after a regular telephone call is placed to the receiving station.

The Bell system, thus far, has four series of Data-Phone data sets—the 100, 200, 400 and 600 series. Each has been designed to work with various types of business machines.

Dataspeed Service

Another development in this field is Dataspeed, a teletypewriter service which will be more than ten times faster than the fastest now available and will offer substantial savings in transmission costs.

Two types of service will be offered. Type 1, for five-level teletypewriter tape only, will be available late this year. Type 2, for five through eight-level punched tape, is scheduled for the first quarter of 1962.

The Dataspeed system can be used alternately with voice services by businesses having existing Bell system leased lines, since only a minimum of line-time will be required for transmission of volume data. An ordinary 50-word message or its equivalent can be sent in less than three seconds.

The increased volume per minute, subsequent cost reduction and inher-

ent versatility of Dataspeed will widen the range of punched tape applications to include such data transmissions as:

- Centralized payroll processing for multi-unit operations.
- Centralized computer service for a number of outlying branches.
- Large volume transmission of letters, reports and other copy.
- Centralized record keeping for widely scattered operations.

Last August an ultra-fast communications system linking two widely-separated eastern computer centers was demonstrated by International Business Machines Corporation at the New York Telephone Company.

The system, connecting data processing facilities in New York city and Poughkeepsie, utilizes telephone cable, a system microwave radio network and specially developed IBM magnetic tape transmission units.

The magnetic tape transmission units send information between two points—in either direction—both ways simultaneously—at a rate of 15,000 characters per second. This is more than 1,000 times as fast as human speech.

The new system can send and receive as fast as IBM computers and write magnetic tape, at a rate of up to 62,500 characters per second. This maximum tape reading and writing speed can be attained with modified telephone communication data transmission equipment. It takes place not only between Poughkeepsie and New York city, but between any other points in the country. Such speed will allow a company or organization to distribute various jobs among its multiple computer facilities without regard to physical distance.

Future Requirements

These data transmission services easily meet most of today's speed requirements. But systems of the future are going to be even faster—and make today's fastest systems slow by comparison. The Bell system is now putting into operation a communications system that is capable of transmitting data at speeds over one-and-a-half million bits per second. Furthermore, Bell Telephone Laboratories has developed a new pathway for transmission—a method of using light waves the way we now use radio waves. Eventually, this method may make it possible to transmit data at increased speeds, plus telephone conversations.

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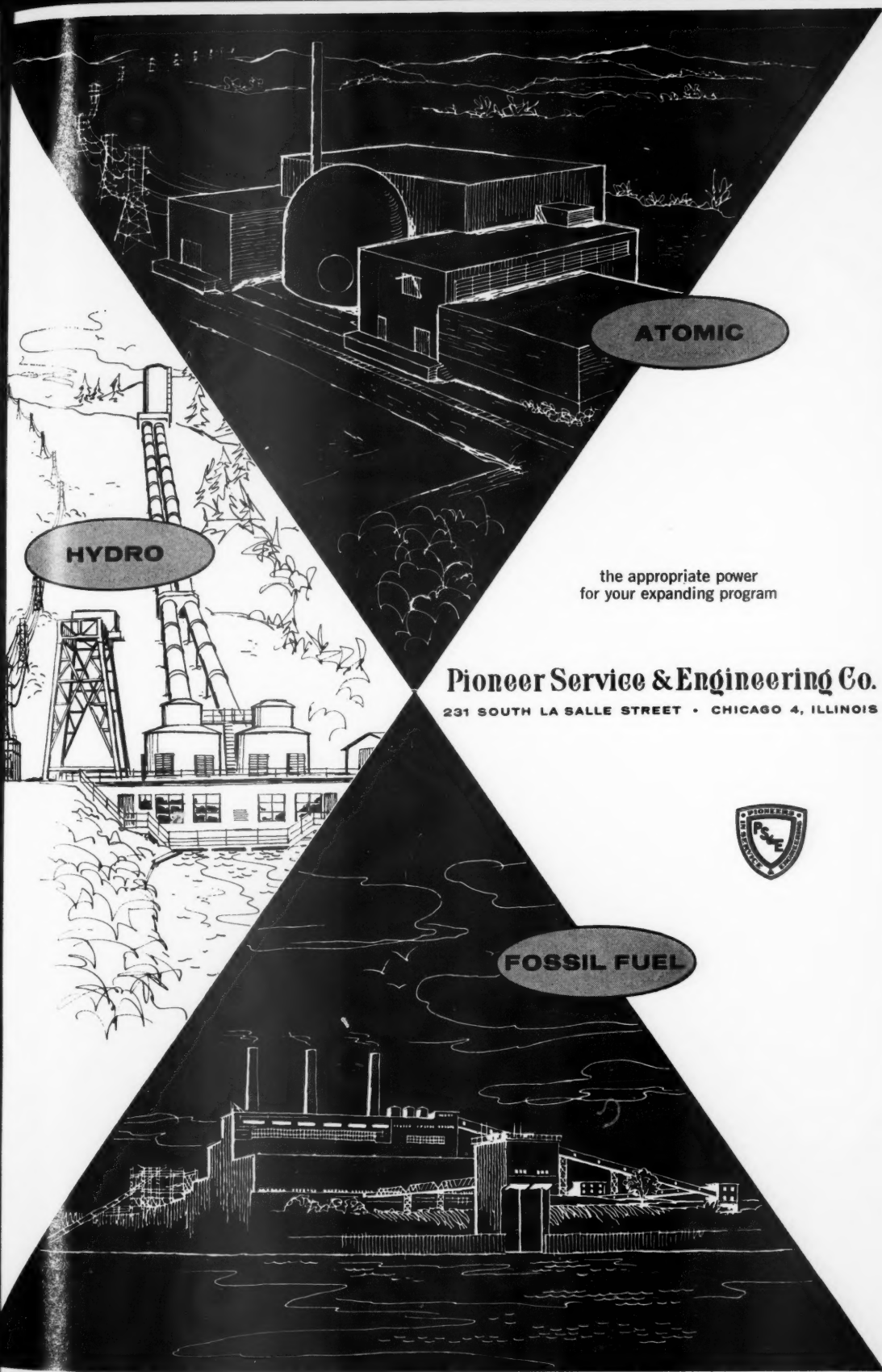
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THE TELEPHONE INDUSTRY GOES TO MARKET

by the millions and television programs by the hundreds, over a single beam of light.

Another innovation in business telephone service will be available later this year as the Bell system begins to market two new types of automatic telephone dialers, which will provide a faster, more efficient way to handle the placing of calls.

The new products—the Card Dialer and the Rapidial—are designed primarily for business use but have applications in the home as well. Both operate on the principle of automatic dialing of pre-recorded telephone numbers.

This development will be particularly useful to people who make many calls or who call the same numbers frequently. Both models minimize human errors in dialing, speed the mechanics of telephoning and increase the efficiency of the telephone as a business tool.

Slated for wider availability in the near future is Bellboy, the personal signaling service for those who cannot afford to miss important telephone calls when they are away from their homes or offices.

The Bellboy customer carries a small radio receiver which emits a signal tone when he has received an important message. The signal means that he should telephone his office, home or answering service. Bell system results in several cities show that Bellboy is particularly useful to such people as doctors, clerics, sales and service personnel and contractors—or anyone whose business takes him on the road or in the field.

Currently under test is a new Conference Speakerphone, designed to fill the gap between small office gatherings of a few people using a regular Speakerphone, and a large audience. The Conference Speakerphone has a maximum of two loudspeakers, master transmitter and five auxiliary transmitters, increasing greatly the flexibility of this important business tool.

Nor have the residence customers been forgotten by the planners. Phones in color and the little Princess telephone have been accepted eagerly by the public, as has Home Interphone, the service which integrates a true home intercommunication system with the telephone. Also under development is a "dial-in handset" instrument suitable for wall or desk locations. The size of the handset has been reduced by a newly developed "space-saver" dial which permits a smaller diameter finger wheel.

Then there is Touch-tone, in which pushbuttons replace standard dial. This new product is under market test and results are encouraging.

In addition to such recent service offerings as Wide Area phone Service (WATS) and point-to-point service (Telpak), Bell system plans to put over nationwide TWX network to disseminate information and to introduce improved PBX service equipment, including an electronic PBX.

The experimental electronic office at Morris, Illinois, now undergoing trials which have been successful, is the prototype of telephone central office of the future. Telephone services undreamed of flexibility and usefulness will be possible with this new facility, the production models of which will be installed and functioning in a few years.

Air-ground telephone service, in test phase, will be extended to entire continental United States and areas of Canada under present plans.

There are many other fields in which telephone men are endeavoring to find themselves involved. Educational television, for instance, one with great potential for future good. What has been attempted is a mere sketch of the complexity and scope of telephony today and promise for the future.

However, no article such as this future telephone developments will be complete without a mention of communications via space satellite. This extension of present microwave systems promises a vast improvement in global communications capability. Work is going forward rapidly to the end that the United States will be first in the field. The Bell system has proposed a plan under which both heavy volume traffic routes as well as points with more modest requirements could be served. The system would provide an umbrella coverage around the world. The satellite that would be used to relay communications between high-volume traffic points could, in another part of its orbit, be used to connect low-volume traffic points. This permits countries with relatively small requirements to be connected into high quality communications network.

With such a system, capable of carrying telephone, television, data in fact the whole range of communications services—there need no longer be any remote areas of the world

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General Telephone & Electronics Corporation

New York, New York

DONALD C. POWER, *Chairman of the Board and Chief Executive Officer*

communications requirements of this country have become so complex that the challenges confronting the telephone industry are greater than anyone could foresee even a few short years ago. Aside from the difficult-enough of finding better ways of doing things we do now, all of us have added challenge of developing new ideas and new concepts in communications so that we can meet the even broader requirements of the future—some of these requirements being so broad, incidentally, it is increasingly difficult to define just what they are.

More than ever before, the need is for great versatility and ingenuity, superimposed upon the industry's traditional capacity for hard work. It is the only way we will be able to meet the steadily increasing need for new and far broader communications services. The challenge is to keep up with new ways of answering old problems. These answers must be imaginative and ingenious; at the same time, however, they must be practical and within reasonable cost limits, in the face of constantly rising costs of doing business.

We do not know of a better way to emphasize the greatly increased need for finding new and better ways of doing things than to point to the fact that the telephone business has become a full-range communications business with all that this name implies. Whether our organizations are large or small, we are all part of an industry whose broader mission is to provide a growing variety of communications services, extending beyond the traditional concepts of telephone service alone, and instead built around the far broader concept of providing the right information to the right place at the right time.

This expanded sphere of operations reflects far more than the addition of new services. It has evolved from the realization that the entire economic, social, and political structure of this country has become increasingly more complicated in recent years, and the telephone companies face the challenge of providing what services are needed to tie this complicated structure together—meet many service requirements that have never existed before. *This is the most stimulating and potentially re-*

warding challenge ever to face our industry.

It goes without saying that the opportunities are especially great in providing communications services for industrial and commercial customers. Last year, business enterprises throughout the country spent an estimated \$4.5 billion on communications, most of which went for telephone services. And yet, here is a field where the potentials have barely been scratched.

One major trend in business communications represents virtually a revolution in the telephone business. This trend will find telephone facilities within a very few years being used more for data and image transmission than for voice communications. I recently saw an estimate that by the end of this year, 6,000 installations of various types of machines and computers will be transmitting business data over telephone circuits, in contrast to perhaps 1,200 a year ago. But even more significantly, it is estimated that the number will reach 100,000 by 1965. Growth of this magnitude in relatively new fields reflects the fact that the businessman is confronted with an unprecedented challenge involving communications—the necessity for faster and more versatile means of gathering and disseminating the wide range of information needed by a modern business enterprise. This challenge has become acute in these days of intensified competition both at home and abroad, and the businessman is looking to all of us to help provide the answer.

The magnitude of this and other challenges to our ingenuity is symbolized by the plans to establish a space satellite communications system, not simply as a supplement to existing cable and radio facilities but as the nucleus of a world-wide system which will usher in an entirely new era of global communications—providing voice, data, and image service to all parts of the world. Here is a dramatic example of the communications industry at its best—moving into relatively uncharted fields and into new dimensions, to broaden its service to the public.

Without question, many longstanding concepts of communications will be discarded as this new global system emerges, and many new con-

cepts will come into being, but how can we prepare for these changes?

Even more importantly, how can we determine what these changes will be and when they will occur? It seems to me that answering these questions will require far greater attention than ever before to *long-range planning*—the act of appraising the opportunities ahead of us and developing effective courses of action to take advantage of them. To put it another way, it means setting new and greater goals, and embarking on sound courses to reach them.

In this dynamic economy of ours, we all know how difficult it is to keep up with today's situations, let alone try to look ahead and anticipate what will happen in 1962 or 1965. But the planning job must be done, if we hope to provide new communications services when they are needed.

Good planning seems to require a high degree of open-mindedness and willingness to change—not change for the sake of change but because there always is a better way to do the job. It also seems to require optimism and enthusiasm, and if we combine these requisites with a practical approach to business realities, then we have the basic requirements of good planning.

In the final analysis, however, we all know that a plan is only as good as its execution. No matter how beautifully conceived, a long-range plan is no better than the skill with which it is put to work. Moreover, it is no better than the willingness to change the plan to meet new competitive challenges.

As a philosopher said, "Fortune is the ruler of half of our actions, but she allows the other half to be ruled by us." Ruling that "other half" with imagination and skill is the key to the future of the communications industry.



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T. E. I. Corp.

Telephone Electronics Installation
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California-Pacific Utilities Company

San Francisco, California

D. J. LEY, Vice President and Treasurer

DURING 1960 California-Pacific Utilities Company completed the installation of automatic toll ticketing equipment in its Oregon telephone properties. The ticketing equipment installed is the "line identification" type and the design makes provision for the addition of facilities in the future for "person to person" "credit

card" calls, as well as station-to-station calls. This installation also involved the rezoning of two new exchanges on to a toll center that was not originally designed for any additional telephone exchanges. This, of course, required considerable regrouping and rearranging of circuits and "switch-trains" within the toll

center. For those telephone companies considering ticketing equipment, should like to recommend that a sufficient time and study be given to investigating the "pros and cons" of this type of operation. Our experience with ticketing equipment, however, has been very favorable, approximately 80 per cent of "station-to-station" calls being effected.

The company has adopted the use of steel, prefabricated telephone change buildings in smaller communities, design and color of these buildings being such that they tend to blend in with the buildings surrounding the area. Cost and time in construction have been greatly reduced by adopting this type of building. We are presently completing construction of three such buildings, one in California properties and two in Oregon properties. Also, the company has adopted the use of "Figure 8" or integrated messenger cable" for outside installations wherever practical. Some savings in costs of installation have resulted. The company's plant work also included the installation and use of a "Line Concentrator" in an area having rapid and unpredictable load growth patterns.

California-Pacific Utilities Company's future construction plans include the installation of toll ticketing equipment in its Nevada and California operations. Future plans contemplate continued provision of the color telephone, standardization to six basic colors with special sales emphasis on extension telephones, PBX's, automatic dialing devices and other telephone subscribers' services.

In the special services field the company has made preliminary investigations looking toward the possibility of making mobile telephone service available to its telephone customers in a portion of the California operations. Mobile telephone service that is an "over-all" function of a telephone company, we feel, can best serve the customers' needs in providing both local and toll service without costly duplication of pieces of equipment.

In addition, contractual arrangements are about to be completed toward making Wide Area Telephone Service (WATS) available to subscribers in the company's Oregon, Nevada and California operations.

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California Water & Telephone Company
San Francisco, California
PETER A. NENZEL, Vice President
and General Manager

THE sizzling sixties may not be sizzling yet but they are certainly beginning to heat up in California. The California Water & Telephone Company's operation in South California.

erving that portion of the Golden State which continues to grow, population-wise, at a pace faster than the national rate, an area described as one of "the most incredibly varied, productive, volatile and dynamic areas of real estate on earth," forecasts a continuing responsibility to meet the communications requirements of such an economy.

highlighted by the acquisition of the Coachella Valley Telephone Company on December 31, 1960, and the completion of the merger in mid-year, the year will also witness the final central office conversions which will produce a 100 per cent dial operation for the California Water & Telephone Company's property.

Estimated net additions of \$13.5 million will produce an increase of over 23,000 stations during 1961 (including acquisition of Coachella Valley Telephone Company) and an increase of 11,000 stations is forecast for 1962 requiring estimated net additions of between nine and ten millions of dollars.

A continuing service expansion program has resulted in over 92 per cent of the total subscriber stations having access to the nationwide DDD network, with the balance being served from toll centers incorporating operator toll dialing.

The out-of-town subscription to the all-number calling program has been effected in approximately 25 per cent of the company's total stations involving 11 exchanges. More than 10,000 telephones are now associated in a program of gradual change to the numeral-for-letter arrangement, which nine additional exchanges will be completely converted in 1961 and 1962.

A reinforcement of present microwave facilities now providing subscriber lines to provide additional trunk facilities will be completed during the year.

Programming is now being prepared to provide business message rate service on a non-optional basis in the exchanges associated with the vast Los Angeles Metropolitan area. This service will become effective by July 1962.

A gradual change from unit record equipment to data processing in accounting methods is now in process and this will ultimately result in total data processing which will encompass all records of all departments of the company.

A merchandising program begun in 1955 is being pursued with vigor, especially directed towards the business service market in the complex services involving PBX installations, intercom and public address equipment, closed circuit television, radio and other competitive services. Emphasis is constantly directed toward the residential market involving color, extensions, home-interphone and associated equipment. This program has resulted in an extension-to-primary ratio of over 18 per cent to date.

A forecasted population gain of over 65,000 which will be accompanied by a market for 45,000 additional telephones and associated services over the next five years indicates that the real sizzle in the sizzling sixties is rapidly becoming a reality and the California Water & Telephone Company has its sleeves rolled up and ready.

BENCH MARKS FOR PUBLIC RELATIONS?



The lack of "yes" or "no" answers in measuring public relations results makes it hard to evaluate the effectiveness of this important work. Often, Commonwealth's public relations consultants can help establish bench marks for measuring and guiding company plans and programs.

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THE TELEPHONE INDUSTRY GOES TO MARKET

Capital City Telephone Company

Jefferson City, Missouri

JAMES F. McHENRY, Secretary

THE year 1961 has been an auspicious one in at least one regard for Capital City Telephone Company. In March, construction was begun on an addition to the central office building that will more than double our usable personnel and equipment space.

Outside plant construction has also been extremely active, with a substantial amount of cable up to 1,515 pairs in size, as well as considerable underground conduit having been or being installed. This work, in addition to a number of rural extensions, has required the use of outside contractors for most of the year.

Growth of population in the service area, while not extremely rapid, has been steady, resulting in substantial station gain during the past year.

Perhaps most impressive in service facility expansion and improvement has been the installation and upgrading of business communications systems—PABX's, key systems and the like. The increasing flexibility

and variety of design in this field well as the increasing reliance communications make such systems progressively more valuable to business customers.

Color telephones, we are gratified to note, continue to sell extremely well. At present, our color percentage of total stations stands at 13.5, with no end in sight.

Extensions continue to be easier to sell to straight line subscribers, which to us indicates greater demand for convenience service results from improving basic service. Actual upgrade activity has been high, and will continue in consideration of the fact that service improvement principle applies also to toll service stimulation and other services.

For the longer run, we have scheduled the initiation of all-number dialing for December 1, 1962, and beginning to concern ourselves with planning for direct distance dialing sometime after that date.

Carolina Telephone and Telegraph Company

Tarboro, North Carolina

J. F. HAVENS, Vice President

Fewer Insulators on Ditchbanks

To provide Carolina Telephone and Telegraph Company's employees with a systematic means of saving and, at the same time, an opportunity to become part owners of the company, an employees' stock purchase plan was inaugurated in 1956. Shareholders of the company waived their preemptive rights to 20,000 shares (since split five for one) which were set aside for purchase from time to time by employees through payroll deductions. Each offering of stock is authorized by the board of directors.

Since that time, 22,000 shares of stock have been purchased by employees through two separate offerings. It is estimated that nearly one-half of Carolina Telephone's 2,300 employees are now stockholders in the company.

Each employee with as much as three months of service was eligible to participate in the stock offerings. The number of shares which an employee could elect to purchase was based upon individual annual earnings. Participation was entirely voluntary, and subscription to maximum individual entitlement was not required.

At the outset of each plan, the purchase price per share was established at 83 per cent of the market price of the date payment was completed and payroll deductions continued until the purchase price was reached. Interest on accumulated balances was paid at 3 per cent compounded semi-annually. Except in the case of employees who were separated from service, stock certificates were issued only when installment payments were completed.

Individual federal income tax payments at minimum withholding rates were made by the company on the difference between the stock's market value and the amount paid by employees.

Employees who elected to purchase stock were entitled to cancel their elections at any time and (1) receive in cash the amount credited to their accounts plus earned interest or (2) have the accumulated balance applied to the number of shares which this balance would purchase. The plan also included provision for employees separated from the service as a result of dismissal, retirement, or resignation, as well as those granted leave of absence or deceased.

employee reaction to the plans was highly favorable. Nearly 60 per cent of the employee body participated, and the number of cancellations was small.

Shortly after the second employee stock issue was completed, a survey was conducted to determine the interest in a third stock purchase pay-deduction plan. The response to the survey indicated that employees were strongly interested in a subsequent issue. It is currently contemplated that a third offering of company common stock will be made available to employees within the next

few months.

Employees' stock purchase plans enable employees to buy securities in the company on an installment basis, thereby providing them with a relatively painless means of acquiring an investment which will enhance their economic security. While not designed to encourage speculation, financial benefit also results from being able to purchase stock for less than the prevailing market price.

In addition, there are intangible salutary effects. Actual ownership in the company instills in employees a sense of proprietorship, creating a

more lively interest in the welfare of the company. It can bolster morale and stimulate pride in the organization; and finally, it can provide a community of interest for employees and owners, which is the natural goal of all progressive management.

As one veteran line foreman said, "The more employee shareholders we have, the fewer insulators we will find on ditchbanks."

Note: Details of the plan may be obtained from the personnel department, Carolina Telephone and Telegraph Company, Tarboro, North Carolina.

Central Telephone Company

Lincoln, Nebraska

TORAL DUCKETT, Vice President

CENTRAL TELEPHONE COMPANY and its Associated Companies, Virginia Telephone & Telegraph Company, Southern Telephone Company, Lexington Telephone Company, Middle States Telephone Company of Illinois, La Crosse Telephone Corporation and Southeastern Telephone Company welcome Southern Nevada Telephone Company as a member which will be operated as a separate division of Central Telephone Company.

Central's philosophy of continuing expansion is manifest through aggressive merchandising and acquisitions which have the potential for enhancing the operating efficiencies of the system.

Gross additions of \$17 million with cash requirement of \$16.3 million in 1961 brings Central's goal of 100 per cent dial-automatic operation to anticipated accomplishment in 1962. The system's program of conversion to DDD (direct distance dialing) continues with two installations completed in 1961 and four scheduled for 1962. The highlight of this program is the inauguration of direct dialing person to person and premium toll.

Expanded EAS (extended area service) programs in Illinois and North Carolina follow this very important trend which will be an increasing future requirement of our industry. The company subscribes to the theory that as a community of interest expands careful consideration and expansion of the telephone calling service must follow. Orderly movement in this direction is thus indicated. Reasonable acceptance of this principle by the regulatory Commission should enable the company to continue to offer such expanded service on an area basis during 1962.

An aggressive merchandising pro-

gram continues on the concepts of service counseling and total employee participation. Employee acceptance of and accomplishment in such programs have been most rewarding. Merchandising efforts must now be expanded toward the more sophisticated elements of service. The saturation point of basic service has been practically reached—future progress lies in multi-extension homes, intercommunication in homes and on farms as well as at business locations. Future progress depends on the encouragement of those elements of service which enhance toll usage, such as

automatic dialers; increase the effectiveness of service through automatic answering and announcement devices; and promote usage at all age levels as well as encourage off peak use of toll facilities through uniform "wholesale" rate treatment.

We support and participate in USITA's efforts toward continuing study and insistence on just compensation and separation of revenues with Bell system companies.

The challenges of the 60's are many but will be successfully met through concerted and enthusiastic action.

This is not and is under no circumstances to be construed as an offer to sell, or as an offer to buy, or as a solicitation of an offer to buy, any of the securities herein mentioned. The offering is made only by the Prospectus.

September 20, 1961

250,000 Shares

Telephones, Inc.

Common Stock

Price \$8 per share

Copies of the Prospectus may be obtained in any State only from such dealers participating in this issue, including the undersigned, as may legally offer these Securities under the securities laws of such State.

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Incorporated

Chenango & Unadilla Telephone Corporation

Norwich, New York

W. S. KINGMAN, *President*

THE telephone industry has done such a good job of providing telephone service to the public that today anything less than perfect service brings forth a flood of complaints. The fact that a service interruption may be due to an "Act of God" makes no difference—the telephone public wants and expects top grade service.

This is as it should be and we must all continue to put forth every effort to insure that the telephone public continues to feel this same way. If there is to be any change at all it must be toward an even more critical public.

Railroad people become complacent and felt the public had to come to them. They learned the hard way—that if the public can't get the type of service they want they will find some way of getting it elsewhere. The telephone industry must learn from the experience of the railroads.

We in the telephone industry must

be continually on the lookout for new and better ways to serve the public and when we find such a way we must promote it to the best of our ability. This does not mean just colored telephones or new style sets. Yes, these things may add to the decor or be a little more convenient but they are not the total answer.

Telephone service has got to be made even more convenient and more trouble free. The telephone industry must continually strive to find more and better ways to handle the communication requirements of a public that is continually looking for better and cheaper ways to take care of their wants. If this isn't competition, I don't know what is. The railroads wouldn't admit this point. We can't let this happen in the telephone industry.

True, we of the independents still have Mother Bell with her great Bell laboratory. But we can't sit back and

figure they will come up with all the answers we will ever need. There are too many others trying to figure out how they can get the gravy out of business—and always remember wasn't Mother Bell that developed the dial system.

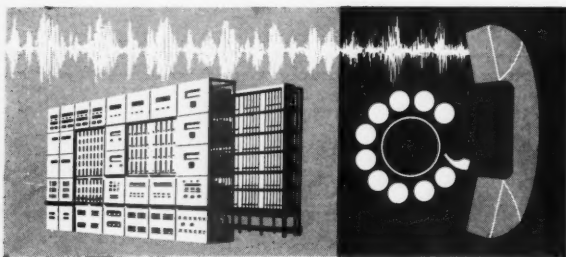
Another thing, telephone companies can and may price themselves out of the market. Remember the public is always looking for better and cheaper ways to take care of their wants. We must continually be on the lookout for ways to improve our service without adding to its cost.

Mother Bell through Western Electric is furnishing telephone supplies and equipment to Bell companies at prices far below what independents must pay. The independents must find a way to obtain for themselves this same advantage. Some of the arrangements must be made with independent manufacturers and suppliers not only for better prices but to insure more and more research on their part with the help and co-operation of the operating companies. If it means banning together of more independent telephone companies then that must be done.

The maintaining of a continuous supply of well trained telephone people is of prime importance to every telephone company. Without this continuous supply, the industry great will gradually pass and our service will start that gradual decline that spells "ruin."

Many small independents experience much difficulty in maintaining this supply of well trained people. Again if it means banning together to assure this supply of well trained personnel then that is what we must do.

No stone can be left unturned to assure the public of the most convenient, perfect, economical communication service that man's mind and effort can devise.



Serving the Southwest's need for MODERN COMMUNICATIONS

Steady population growth within the territories the Company serves was responsible for an increase of more than 4,000 in the number of telephones in service during the first half of 1961. The Company provides modern, efficient service to 157,000 telephones in certain areas of Texas, Oklahoma, Louisiana and Arkansas. Of the total telephones in service, approximately 95 per cent are dial operated. During the past five years, total plant investment more than doubled and now exceeds \$60,000,000.

THE SOUTHWESTERN STATES TELEPHONE COMPANY

300 Montgomery Street • San Francisco, California

Clifton Forge-Waynesboro Telephone Company

Staunton, Virginia

WILLIAM W. GIBBS, Vice President

Part of The Job

1958 when our held order position had been reduced to a one or digit figure, we recognized that our growth would be largely dependent upon our ability to get out new business and sell our present customers more services.

It did not seem practicable for a company of 20,000 stations to set up a special sales department and attempt a marketing program along the lines of those conducted by the larger companies. We, therefore, examined means for getting the greatest results at the smallest expense.

Our first step that year was to transfer one plant man from the work of each exchange, give him a full course in the means of finding prospect and how to go about making the sale. This campaign, which ran for several months, was effective; but, when considering all this, was too expensive.

In the following two years we took

another approach. We offered cash awards and prizes for the best selling job, and all hourly paid personnel were eligible. This campaign was also a success, but we began to realize that we were paying our people a premium for doing something that should be considered a part of the job.

Early this year, we appealed to all personnel at meetings held for the purpose to get out and sell for the sake of pride of achievement, for the enhancement of their job security and because selling the company product or service was everyone's job no matter whom he worked for or what his position.

This approach worked far beyond the hopes and expectations of the instigators of the program. More employees participated in the selling effort than had ever participated when additional compensation or prize had been offered. In view of the

approaching saturation point, resulting from the successes of three years of repeated sales campaigns, a somewhat depressed economy in the early months of 1961, and the lack of the incentive of material reward, the results of this campaign were, and still are, extraordinary.

The co-operation and effort put forward toward the success of our most recent sales program has convinced us that our people have accepted the contention that selling is a part of the job.

With good personnel relations the small company need only ask that the job be done, show why and how to do it, and then recognize the accomplishment.

Company publications, meetings and annual picnics or dinners provide excellent opportunity to recognize and honor, rather than reward, the sales achievements.

Commonwealth Telephone Company

Dallas, Pennsylvania

H. H. BUTLER, General Manager

COMMONWEALTH Telephone Company faces certain facts that outline the next several years; namely:

(1) Construction programs in excess of \$3 million a year must be continued.

(2) Net station gain and therefore revenue gain, except as stimulated by sales promotion, will decrease to a "normal" steady growth.

(3) Toll revenue increase will parallel station gain except as improved by settlements and promotional

(4) The public will continue to increase its demand for improved services such as reduced number of parties to the line, extension telephones, home and farm interphones, special services, customer nationwide dialing, extended area service.

These facts require that we be alert and resourceful in programming revenue requirements (marketing and rate adjustments) to support the required investment to provide facilities for additional and new services which public wants.

Commonwealth has increased the scope of its marketing programs. The sale of extensions has increased progressively since 1957. Business of lamp and key systems, P's, and PABX's are continuing at good level with both commercial

and engineering specialists assisting the contact personnel. Toll special services such as tie lines, off-premise extensions, full periods, etc., are up 21 per cent over the 1960 level; directory advertising revenues are up 13 per cent, and paystation revenue is up 9 per cent. We plan to put home and farm interphones on the market this fall as the equipment becomes available.

Our construction programs for the next three years will require about \$6 million new money. We are now designing a permanent capital financing program schedule which would service this new-money requirement. The nature of our construction requirements has changed. Where we formerly talked of per cent dial telephones, we now program 91 per cent of company exchanges to direct distance dialing by 1965. We plan to revise base rate areas for half our exchanges, and establish some extended area service routes.

A serious problem which we must meet in the next year or two is the conversion of our relatively low-cost toll plant with increasing revenues, to higher-cost local plant with fixed revenues. This is necessitated by the increasing public demand for extended area service. The impact of the public's increased demands for

larger calling areas would tend to result in a serious net revenue loss to our company even with an increase in local rates. We are actively working on the solution of this problem.

Success for the next several years will be measured on our ability to:

(1) Not only meet the customers' demand for more and better service—including anticipating and guiding future demands—but also aggressively promote revenue producing items.

(2) Provide our employees with fair wages, good working conditions, with opportunities for development and yet hold our overall labor costs in line.

(3) Obtain a fair return on our investment and thus be able to attract new capital at reasonable cost.



The Eastern Indiana Telephone Company

Winchester, Indiana

FRANCIS SIMPSON, Executive Vice President

THE Eastern Indiana Telephone Company, which serves 17 exchanges with lines in seven counties in central Eastern Indiana, has all of the problems which most telephone companies have today.

We completed conversion of all of our exchanges to dial in 1951 and are now working on such problems as DDD, microwave and machine

billing in connection with subscriber toll dialing. We installed IBM billing equipment in October 1958 which has proved satisfactory and a good move economically.

We are now very busy with remodeling and improving our Winchester toll center cable plant as to both toll circuits and local service. We let a contract with Henkley and

McCoy of Elkhart, Indiana for installation of two miles of 4, 6 channel duct with approximately new manholes. This duct will eventually take several thousand pairs out of the air and which go underground. This work progressing satisfactorily as far as the duct work is concerned. The and the new cable installation is approximately a \$300,000 project.

Florida Telephone Corporation

Ocala, Florida

MAX E. WETTSTEIN, President and General Manager

FLORIDA Telephone continued to move forward in 1960.

Continued growth was experienced with a 9.2 per cent increase in total telephones served during the year. Since 1945 total telephones in service have increased 559 per cent and in the past seven years 123 per cent. Today, measured in terms of tele-

phones served, the company is nearly seven times larger than fifteen years ago and over twice as large compared to only seven years ago. At the end of June 1961 there were approximately 52,000 telephones in service.

Florida Telephone's rapid growth in the post war period has been directly associated with the rapid growth of its operating or service area. This territory comprises an eight county area in central Florida of nearly 6,000 square miles. While citrus production and processing have long been the dominant segments of the area's economy in the past, the beauty, climate, and thousands of clear fresh water lakes in this part of Florida are attracting increasing numbers of new permanent residents. The area has experienced an 84 per cent increase in population over the last ten years. This can be compared with a 79 per cent for the state as a whole and a 19 per cent increase for the United States. Florida now ranks 10th in size among the states as compared to about 20th in size ten years ago.

Measured in terms of total operating revenues, Florida Telephone is the largest independent telephone company in Florida not affiliated with a holding company group. Out of approximately 3,200 independent companies in the country, it ranked 30th in size based upon total revenues in 1960. Through an extensive network of company-owned local facilities, long distance and radio relay microwave systems, eighteen exchanges and eight sub-exchanges, it furnishes telephone service to approximately 120 cities and towns throughout its service area.

Florida Telephone has been in forefront among progressive companies which have completely modernized their facilities. Several years ago it became one of the first to realize the great value of radio microwave for long distance purposes and now has an extensive microwave network. It was also one of the first to introduce direct distance dialing and presently through expansion of its facilities about 83 per cent of telephones have access to nationwide direct distance dialing. Presently about 40 per cent of its total long distance messages are direct dialed by customers without operator assistance. Through continuous modernization programs it has been able to show a significant improvement in its operating ratio over the last years. This has also included conversion of its revenue accounting department to IBM operation.

Next year the company will enter into a new phase of mechanization involving customer dialing of person to person long distance calls. The new program will require several years to complete. When this is combined with the present dialing of station to station long distance calls under direct distance dialing, substantial further economies are expected.

For several years the company has also been engaged in an employee selling program of extension telephones and colored sets, and this program is producing increasing revenues for the company.

Florida Telephone has not only met the challenge which rapid growth presents to any utility, but has likewise met the challenge of mechanization wherever possible in order to check rising operating costs in an inflationary economy.



2 NEW FEATURES OF FITCHBURG CHIPPERS

Give you longer engine life, save gas, add safety

1. EXTRA PROTECTION for your brush disposal crew with NEW SAFETY STOP SWITCH (now standard at no extra cost). Stops chipper within seconds.

2. GREATER ECONOMY with NEW SOLENOID SWITCH*. Allows operator to idle motor between actual brush feedings from his normal feeding position. You save on gas and engine wear.

TROUBLE-FREE Fitchburg Chippers chip tree trimmings fast. Feeding action is smooth, positive, because of patented spring-activated feed plate. Fitchburg Chippers are choice of telephone, power and tree service companies, and others. Send for free book "Chip Dollars" - write Dept. PUF-110.

*optional

FITCHBURG ENGINEERING CORPORATION
FITCHBURG, MASSACHUSETTS

Independent Telephone Corporation

Dryden, New York

WILLIAM B. HARRISON, *President*

Since World War II, the independent telephone industry has had difficulties, largely occasioned by extraordinary technological advances and the rapid population expansion of the areas it served. The single problem of financing an expansion of service and of substituting modern equipment for old posed, and still is, problems that threaten the existence of many companies.

It was to solve these problems that Independent Telephone Corporation was established. It was established by men who had had long experience in the management of independent telephone companies and who had lived, firsthand, through the many and complex problems of the postwar era. Because of this background, they realized that the only clear answer to the problems facing their particular industry lay in the establishment of Independent Telephone Corporation. ITC was therefore conceived and exists as a holding and service organization to provide independent telephone companies with the ability to retain local management and at

the same time to take unlimited advantage of ITC's highly specialized skills in finance and engineering to raise capital, and to make technical improvements in individual company operations.

ITC headquarters are presently in Dryden, New York. Here its affiliates and most subsidiary companies are provided with services at cost from a central service center. Such a center can be established anywhere in the United States where the need exists. The services provided enable local management to devote full time to the best possible telephone service to subscribers. Some of these services are: preparation of subscribers' bills; preparation and maintenance of accounts; engineering; plant maintenance; legal, and financing for modernization. And on the financial side, because of its know-how and resources, ITC can provide the following kinds of valuable assistance to its subsidiaries: obtain long term borrowings; loan money to operating companies; and arrange sale of equity securities.

Since 1957, when ITC was founded, the owners and managers of independent telephone operating companies in many states have joined the system. During that period many other independent telephone companies have been bought out and lost their identity. With ITC, this has never been, nor will it ever be so.

ITC subsidiaries and affiliates operate under their own names. *Most important*, management invariably is local and in the hands of the same people who owned or managed these companies before joining the system. It is the policy of ITC, whenever possible, to provide management with employment security and make managers shareholders in the parent company. Thus all key individuals in the organization have a stake in the success of the enterprise. This makes for an unusual spirit of team play and, since each key individual owns a portion of the company, for hard work and a constant effort to improve services provided customers. This is why ITC constantly stresses the fact that it is an association, or system, of people.

The Lincoln Telephone & Telegraph Company

Lincoln, Nebraska

MERLE M. HALE, *Vice President*

WITHIN five years the Lincoln (Nebraska) Telephone and Telegraph Company expects to have per cent dial service in its 126 exchanges, with nationwide direct distance dialing. Further mechanization has been accomplished through the installation of machine billing. Over 100 of the stations are served with microwave toll facilities and other microwave systems are planned. The area directories will be published this year. All-number calling is being substituted. Aggressive sales and marketing efforts are resulting in gains and increased use of the telephone.

Last year the company gained 6,000 stations, the second largest gain in its history, and this year installed its 100,000th telephone. This is a gain of 100 stations since 1950. The company now serves one-fourth of Nebraska's telephones. Toll messages last year increased 10 per cent over 1960 and this year will exceed seven per cent for the first time. By the end of this year, 54 of the 126 exchanges

will have nationwide direct distance dialing.

Since 1956, the company has converted 27 exchanges to dial service and established two new dial exchanges. Eight major buildings have been constructed, including a nine-story general office and equipment building at Lincoln. Microwave facilities have been installed to provide toll message service to 24 exchanges. This will be increased to 54 exchanges by the end of this year. Data processing equipment now provides machine billing for all accounts as well as controls for inventories, payroll, labor distribution and other functions. Magnetic tape equipment is being installed to greatly increase the speed and versatility of this operation.

Beginning next year, five area directories will be published, thus consolidating the 28 books now printed. Four of these will serve about 20,000 stations and the Lincoln area book about 80,000. These directories will be eligible for national Yellow Page

(Continued on page 40)



**SERVING 9460
SQUARE MILES**
in California and Nevada

FACTS . . .

Total Telephone Plant Investment	\$28,845,131
Miles of Long Distance Pole Lines	1,503
Miles of Micro-wave System	460
Total Number of Employees	570
Total Operating Revenues	\$6,796,076

**CALIFORNIA INTERSTATE
TELEPHONE COMPANY**

advertising and will provide classified sections for exchanges not now having them. They will also facilitate direct distance dialing and extended area service. Thirty-five exchanges now have all-number calling and 43 more will be added by the end of 1962.

For twelve months ending June 30, operating revenues increased from \$13.8 million to \$15 million and earnings per share of common stock increased from \$4.14 to \$4.85. This trend reflects favorable business conditions and results of programs of

merchandising and cost reduction. Investment has doubled in the last years and now stands at \$62 million. The gross construction program for the year amounts to \$6 million and the year's program will be completed

The Lorain Telephone Company

Lorain, Ohio

H. E. HAGEMAN, Chairman of the Board

OUR company expects to spend approximately \$2 million in the next twelve months to meet the demand for communication in our rapidly expanding area.

A large addition to our main office building is now under construction. We expect to continue our program of making available to our customers the many fine products that have been

developed in the past few years such as additions to our mobile service, electronic secretaries, Dialaphones for the convenience of our customers, hard-of-hearing telephones, colored telephones, Starlite telephones, extension telephones, leased lines to business establishments and many other improvements in communication in the telephone field.

We also expect to install additional microwave circuits between some of our exchanges, and add a large number of units to our mobile telephone system. This company has eliminated all 8-party lines and now is working on a plan of eliminating 4-party lines in the next five years.

Mankato Citizens Telephone Company

Mankato, Minnesota

WILLIAM C. BLETHEN, President

MANKATO CITIZENS TELEPHONE COMPANY recently announced plans for construction of a new telephone building to house the Mankato exchange and general offices of the company. Construction is expected to begin this fall.

The new building will permit our company to take full advantage of all electronic and other advances in telephony to continue to provide the best and most modern service to the subscribers. The company plans to have available all modern equipment so that the service it provides to subscribers of this area will be equal to, or better than, that found anywhere in the country.

The present advances in electronics in the telephone industry are spectacular and will be provided by our company as soon as they are proven to be practical.

The increased use of microwave facilities in the telephone industry for toll circuits, leased private line circuits for both communication and data transmission, as well as television circuits facilities has also been considered.

Provision has been made in the plans for the new building to include the construction of a 50-foot microwave antenna tower on the building at some future time. This will enable the company to keep abreast of important developments in this relatively new phase of communication.

This step taken by the board of directors was culminated after many months of investigation and study. The firm's management predicted in 1954 that the present space for operation would be inadequate. This prediction would be inadequate. We no longer have adequate room for our switchboard equipment or for the general office and personnel.

The present building was completed

in 1926. At that time the company served 5,947 telephones in five exchanges. Its investment in the telephone plant then was \$678,104. The company now has a total plant investment of \$5,661,136, serving 740 telephones in eight exchanges.

Studies show that the greater Mankato area has had an average of 100 per cent increase in population each of the last three decades. We feel the area will continue to grow and prosper.

To keep pace with this growth and faith in the future and to provide the finest telephone service to subscribers, it is necessary that we too, plan for an orderly and engineered telephone plant.

Over many years, the Mankato Citizens Telephone Company has zealously fought to preserve its status as an area-owned independent telephone company. As evidence of this unusual stature the Mankato Citizens Telephone Company enjoys an unusual independence in the telephone industry, of special interest to observers. Mankato is the second largest city in the states of Minnesota, North Dakota, South Dakota, Montana, Idaho, Washington and Oregon to be served by an independent telephone company. The only telephone community is Everett, Washington.

The four telephone companies in the above areas that are larger than the Mankato Citizens Telephone Company all obtained their status through the virtue of holding company operation with properties spread out over a large and crossing state lines.

NEW! TOWER OBSTRUCTION LIGHTING CONTROL and LAMP FAILURE ALARM UNITS
... APPROVED
for unattended TELEPHONE COMPANY MICROWAVE RADIO-RELAY application.



MODEL LC-2102
For two light levels
(Shown with BR-1205 Resistor Ass'y.)

COMPLETE ... WITH BEACON DIMMING AND DUMMY LOAD RESISTORS

SIX MODELS AVAILABLE for 1, 2, and 3 light levels — with choice of test switches or circuit breakers. All units provide a separate signal upon failure of each top lamp, and for failure of any one or all side light lamps on the tower. Choice of switches or circuit breakers in maintenance test circuits. ... circuit breakers provide individual overload protection for each lamp circuit on the tower.

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MANUFACTURERS OF

300MM Beacons, Obstruction Lights, Photo-Electric Controls, Beacon Flashers, Special Junction Boxes, Microwave Tower Light Control and alarm Systems, Tower Isolation Transformers, and Complete Kits for: Tower Lighting, Sleetmelter Power and Control.

3200 N. San Fernando Blvd. Burbank, Calif.

Rock Hill Telephone Company

Rock Hill, South Carolina

F. S. BARNES, President

The year 1960 was a year of growth. New facilities in the amount of 15 per cent were added to the plant account. Telephones in use were increased 5 1/2 per cent. The 1960 program included the following: (1) the conversion to all-coin calling; (2) enlargement of telephone building to house additional central office equipment and larger quarters for the accounting department; (3) a central addition with equipment for extended area service to an adjacent community; (4) four systems of cable carrier containing 75 circuits to the adjacent community.

During 1960 the decision was made to install a microwave system in 1961 which would provide additional inter-area facilities for the Rock Hill center and the toll center of the Eastern Telephone Company, Lancaster, South Carolina. There was continued emphasis on merchandising to employees entering into a selling campaign on all types of services offered by the company. The merchandising program was bolstered by newspaper advertisement, bill inserts and spot radio announcements. In planning the time for spot announcements, care was given in selecting the times when the most people would be using their automobiles and listening to programs over their automobile radios. In addition, selected business subscribers' service was studied using a device for automatically measuring load on their telephone lines. Upon finding a congested situation this innovation is used to emphasize with the subscriber his need for additional service.

The licensing of private microwave systems makes possible means of communications to our business subscribers other than through common carrier. To effectively meet this competition we must merchandise and promptly provide services to meet the needs of our customers. There is also a need to improve quality of maintenance because of this competition and to increase direct distance dialing. The company has co-operated fully with the South Carolina Independent Telephone Association in the activities of the Transmission and Communication Improvement Committee. This committee has been instrumental in bringing about a closer working relationship between all companies in South Carolina.

This company's growth in 1961 has

continued at an accelerated pace. The construction budget for 1961 calls for additional facilities costing over \$700,000. A good portion of these facilities have already been installed. A microwave system between the Rock Hill toll center and the Bell toll office in Columbia, South Carolina was placed into service in July with 36 circuits initially. Considerable underground conduit and cables are being installed and a large addition to the central office equipment has been completed. Over the last two years the held application backlog has been eliminated and good progress has been made in meeting the requests for up-graded service. A number of orders for improved private line and special service facilities to the industrial plants of the area were received. Maximum effort has been given to meeting these requests with dispatch.

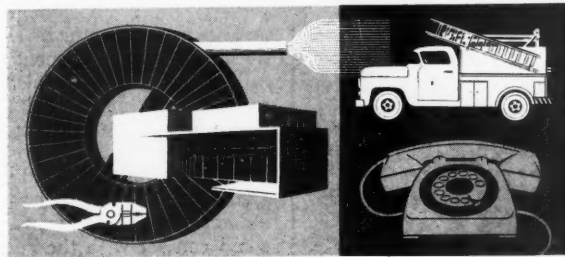
In May of this year an order was received for the extension of the South Carolina Closed Circuit Educational Television Network to one high school in the Rock Hill area. On July 30 an order was received to add

two additional schools to the network all of which were to be in service on September 1. A crash program of microwave and coaxial cable installation has been completed.

Open house programs are being planned for business customers, employees and the general public.

The company expects its growth to continue in the years immediately ahead. We see a need for improved special services and expect to substantially enlarge and expand our toll facilities. This growth will involve additional buildings to house the equipment and to provide quarters for personnel. It will also involve expansion of local dial equipment through the use of sub-offices.

The communication needs of our customers are constantly changing and expanding. The challenge to us is to supply the facilities in our service area that will meet the needs of our customers, to aggressively merchandise the services, and to constructively co-operate with other communication common carriers in providing these services and facilities.



Communications KEYED to people's needs

The Pacific Northwest continues to be one of the fastest growing areas in the country. West Coast Telephone Company now serves approximately 190,000 telephones in certain parts of this area. Total plant investment now exceeds \$85,000,000, which represents an increase of nearly 100 per cent during the past five years. Modern, efficient methods and equipment are important factors contributing to the Company's position as 11th largest of the 3,300 Independent telephone companies in the nation.

WEST COAST TELEPHONE COMPANY

300 Montgomery Street • San Francisco, California

Southeastern Telephone Company

Tallahassee, Florida

E. M. MENENDEZ, Vice President

A GOOD many of the problems and a large portion of our efforts have been recently devoted to the extension of service into the rural areas. The advent of REA financing has made rural service available in areas where it previously was not available. This in turn has increased the demands in areas where it has not yet been made available. The resulting pressures in these areas have required that greater thought and planning be made to work out solutions to the many problems encountered.

The area served by Southeastern

Telephone Company includes vast rural areas, sparsely settled and, in many cases, economically poor. This, of course, adds to the problems.

Nineteen-hundred sixty-one has been a memorable year in Florida in that both the Bell Company and the Independent companies reached a status of 100 per cent dial during this year. The Bell exchange at Lake City was converted to dial on June 4 and the Perry exchange of Gulf Telephone Company was converted on August 31. This makes Florida the fourth state in the nation and the first

in the southeast to become 100 per cent dial.

The growth of our company resulted in the division and offices in Tallahassee being moved out of the telephone building to make room for expanding the company, including equipment for distance dialing, to be established early 1962. There is presently construction of a new division building which will permit all offices and departments to be placed under one roof. We expect to move into this building on December 1, 1961.

The Southwestern States Telephone Company

Brownwood, Texas

D. T. STRICKLAND, Vice President and General Manager

GROWTH and development in the area served by The Southwestern States Telephone Company continues at a healthy rate, reflecting increasing business activity. On June 30, 1961, the company was serving 156,693 telephones, a gain of over 4,000 telephones in six months.

The company's service area encompasses 20,200 square miles in Texas, Oklahoma, Arkansas and Louisiana and an estimated population of 625,200.

The company is continuing its aggressive merchandising and sales program which was expanded early this year by the establishment of a sales and service department. Representatives of this department have been calling upon business telephone users to determine needs and to engineer and sell systems best suited for the individual business requirements. This activity has resulted in increased annual revenue as well as improving public relations by means of the personal contact with the customer.

In addition, the revenue requirements department has been expanded in order to more fully carry out an intensive program of repricing service upwards in those communities and states where needed.

This year's construction budget requires cash expenditures of approximately \$10,300,000. About \$2.3 million will be used for the company subsidiary, Four States Telephone Company, for rural development projects in areas adjacent to Southwestern States property.

Approximately 3,100 telephones will be converted to dial operation in 1961 which will result in over 95 per cent of the company's telephones being dial operated.

Sunland-Tujunga Telephone Company

Sunland, California

ALLAN R. STACEY, Vice President and Manager
Challenges for the Year 1962

MANY are the challenges that lie before the Sunland Company. However, there are three that require specific attention during 1962. These three are training our management people, meeting the competition from miscellaneous common carriers and improving our service to our business subscribers.

These are days of expansion for the telephone industry. As a consequence we are building more plant and employing more people. We install our plant to exacting specifications and we train our hourly people in order that they will do a competent job. However, sometimes we pay insufficient attention to the fact that we

have enlarged the responsibility of our management people and failed to give them training adequate to meet the larger duties.

The challenge for 1962 for Sunland Company includes training our management people to be effective in their jobs. Since management responsibility rests mainly on getting the job done by working through other people, the training will include teaching managers how to be effective with people. This training will include a one-week on-camera seminar at a nearby university use of certain educational materials pictures that are available and training and instruction by the more

NORTH STATE TELEPHONE COMPANY

Supplying

High Point,

Thomasville and

Randleman

with

Local and Long distance

Telephone Service

experienced members of the present supervisory staff.

The second challenge involves meeting the competition from miscellaneous common carriers. In the state of California the Public Utilities Commission has recently decided that individuals or corporations providing mobile radio service under certain conditions are to be classified as miscellaneous common carriers and are therefore public utilities under the jurisdiction of the Public Utilities Commission. Two problems arise im-

mediately. It is possible that interconnection between mobile radio miscellaneous common carriers and telephone operating companies will be solicited immediately. Secondly, the telephone operating companies must face up to the question of whether they should enter more directly into mobile radio service than they have in the past.

The third area of challenge is that of improving our service to our business accounts. In particular, we need to do a better job of teaching medium

size and large business accounts how to use the equipment and facilities we provide. This probably involves direct instruction of their personnel and a periodic review of the equipment we have on their premises in order to insure that this equipment meets today's needs for them. In many cases their needs have been increased or altered in view of changing business conditions.

These are the three major challenges for 1962 for the Sunland Company.

Telephones, Inc.

Chicago, Illinois

PERRY D. WOODWARD, President

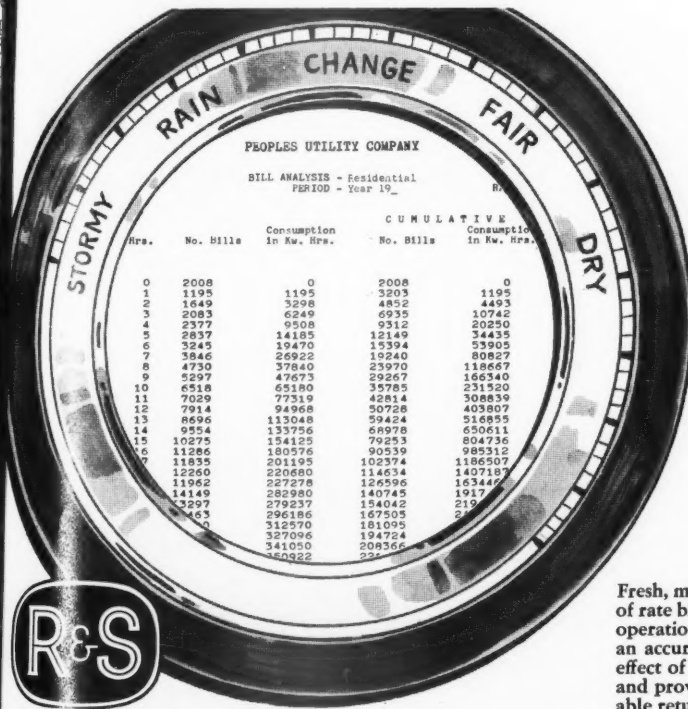
those who will stop and reflect, there is apparent a strong tide change in our independent industry. On the surface the glamorous aspects of technology attract the attention of many. These changes in telephony include the challenge of face communication, the introduction of electronic switching, the development of wider use radio fre-

quencies and the application of carrier facilities to existing wire and cable. But along with these developments there is an equally startling change taking place in the ownership and control of the many smaller telephone companies across our nation.

It has been reiterated for us each succeeding year at our national convention that the number of corporate

entities is less and less, and some foresee within the next seven or eight years a reduction in the number of companies to approximately one-thousand. This change is startling in view of the long period during our history in which small telephone properties were the backbone of the independent industry. While the effects of this change in type of owner-

(Continued on page 45)



Here's a reliable
BAROMETER
for sensing changes
in economic weather

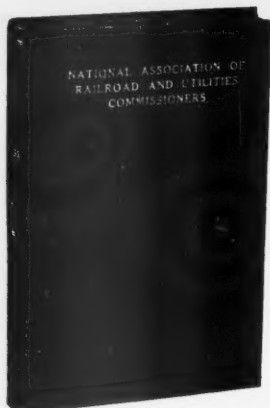
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OCTOBER 12, 1961—PUBLIC UTILITIES FORTNIGHTLY



PROCEEDINGS 1960 CONVENTION

AT LAS VEGAS, NEVADA

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS

THIS edition contains valuable material on the subject of regulation of rates and services of public utilities and transportation companies including the following:

Progress in the Regulation, Services, Facilities and Safety of Operation of Public Utilities; Valuation; Depreciation; Rates of Transportation Agencies; Study of Railroad Problems; Discussions on the subjects of "Duties and Responsibilities of a Public Utilities Commissioner"; "Natural Gas Rate Problems"; "The Role of Communications in Civil Defense"; "Outlook for Railroad Consolidations and Mergers"; and "Current Problems in the Regulation of Air Carriers." This volume contains a complete transcript of the addresses and committee reports of the 1960 Las Vegas meeting. The book is printed and bound in regular book cover.

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**NATIONAL ASSOCIATION OF RAILROAD AND
UTILITIES COMMISSIONERS**

P. O. Box 684

Washington 4, D. C.

are being felt today in different ways, it is more than likely that the most important effects are yet to be discerned.

Telephones, Inc. is aware of the factors which account for this change, bringing itself consolidated some 35 telephone companies into one operating unit. Based on our experience the immediate effects of consolidation have been an improvement in quality of service, with a substantial increase in the number of people who want to have a telephone, improvement in record keeping and the establishment of a sound business unit.

Two factors impress me more than others as being at the root of these accomplishments. First is our insistence on the employment of men and women with the skill to do the job and the desire to be a part of a successful enterprise, and secondly, an adequate supply of capital. The lack of capable people and sufficient financing will be felt increasingly by the smaller telephone owners and operators in the next few months and years. In many areas of the coun-

THE TELEPHONE INDUSTRY GOES TO MARKET

try the recent minimum wage legislation will forceably point out these lacks. In other areas suburban growth will fuel the changes required.

With respect to the long range point of view we believe the ability to render superior service in the future will require the availability of equity and debt funds far in excess of the amounts of capital the independent industry has worked with in the past. We are now facing the problem of giving high-grade communication facilities in all of our service areas, not just the larger communities. The day of by-passing any investment of funds in providing telephone service to smaller communities has gone, and the consolidation of management skills and financing ability is the answer.

Telephones, Inc. is moving to stay abreast with this trend and is planning to assure adequate telephone service for its customers in the years ahead. From this service will come the profits necessary to continue a healthy private enterprise.

United Utilities, Incorporated

Kansas City, Missouri

P. H. HENSON, *Executive Vice President*

WHEN the United System instituted a comprehensive program of modernization and improvement a few years ago, conversion to 100 per cent dial operation was considered to be the interim goal, the "state of the art" achievement in telephonic development.

Now our conversion program is nearly completed. By the close of 1961, the United System, currently comprising more than 500,000 telephones, will be 92 per cent dial, and in the coming year we shall have the full-dial operation toward which our major efforts have been directed in recent years.

In the meantime, it has become obvious that our interim goal is no longer representative of the state of the art. New services and techniques have appeared in the industry . . . ADD, PCS, PEBX, WATS, WADS, and M-TWX, for instance . . . all pertaining to new technological advances in the art and all indicating that dial conversion is only a stepping stone toward further goals.

The United Systems, like many other telephone companies, has put these developments to work. Nation-

wide direct distance dialing is now available to more than half of its subscribers, some of whom have PPCS service. The nation's first production model of a Private Electronic Branch Exchange will be installed in a United exchange yet this year. WATS, WADS and M-TWX services are under continuing study by all of our operating companies.

New techniques have the potential of materially broadening the communications service package offered by the industry. However, the provision of such services is not without its problems. The capital expenditures required to institute new services are substantial. The costs associated with the improvement of existing services and the introduction of new techniques and services accounted for a major portion of our record \$26.5 million construction budget in 1961.

The revenue requirements associated with these expenditures for new services is the most difficult problem area. Without sufficient experience to accurately define initial and recurring

(Continued on page 47)



TECHNICAL TASK FORCE for the Independent Telephone Company

Now the technical skills and knowledge of specialists to meet any long range or emergency problem of the independent telephone company are available on a part-time basis. Whether your problem is one of management, engineering, merchandising or construction, you can be aided by the best experience and trained personnel in the industry.

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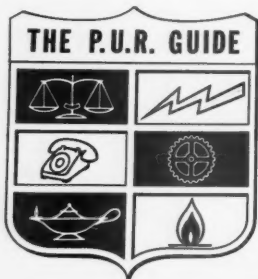
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customer acceptance and technical requirements, it is necessary to study tariff provisions, settlements, operating requirements and regulatory matters to be thoroughly studied. We, like other companies, must be able to provide a consistently attractive rate of return on new capital requirements if we are to continue to adopt the latest developments of telephony. Greater revenues and improved operating conditions are also being sought

through the promotion of sales of additional service items to existing customers. All of our companies have made at least a minimum sales promotion effort, but few of them have devoted the time and effort that it deserves.

The United system is now placing renewed emphasis on marketing, re-vamping its advertising policies, exploring new avenues of employee sales training and providing for closer

supervision and direction of sales efforts. Successful promotion of the refinements of telephone service, we feel, enhances customer relations and helps to sustain the financial stability required to meet the communications demands of the future.

In these ways and others, we continue to strive to reach state of the art achievement in telephony while privately admitting that the pursuit is never ending.

West Coast Telephone Company

Everett, Washington

L. GRAY BECK, Vice President & General Manager

Now an independent telephone company can keep its rate of return at a satisfactory level and at the same time not find itself a victim of exchange rate disparity with adjacent Bell system operations is a new problem.

Of this spot in history our employees have a recognized advantage. In heavily populated and concentrated business centers, along with a manufacturing arm that provides materials at a cost that puts us in our dreams. Competition is a factor—the public generally has greater interest in the total quality of communication service requirements than in which company is providing the service. We, then, are faced with a compelling demand to provide an equal grade of service to that of our "competitors"—and this we must do at a profit.

What do we do about this complex problem? We are careful in the selection of our employees, we give them the best possible training, we equip them with the most efficient type of organization known and we embark on a program of continuing motivation to get the maximum effort and productivity from each of our employees, whether an apprentice or a department head. We don't stop here. We don't stop at just giving the service that people ask us for. We develop merchandising programs, we develop sales programs and we train our customers to get from us a service that meets their total communication needs. Not only do we provide service that a customer wants, but we go a step further to look at his requirements and to see that these are satisfied. When we have assured ourselves that all of these things are being done as well as our Bell neighbors

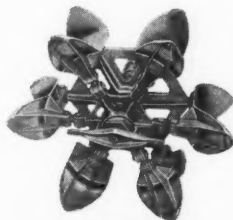
do then we find our problem is still acute.

We then look at what the two segments of the industry have in common. We both believe in the free enterprise system. We each know that to exist we must make a profit. We both subscribe to the thesis that we want to provide the best possible

service at the lowest cost, consistent with fair treatment of our employees and stockholders. Perhaps, though, a very subtle thing has been happening that hasn't as yet come into sharp focus. We are not as isolated one from the other as might have been the case in the past. An analogy might be the drawing together of communities

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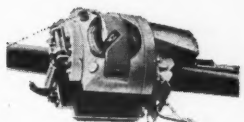
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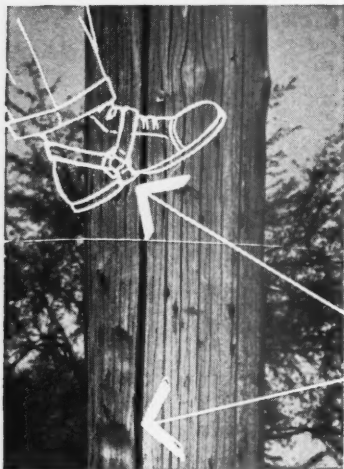


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that has occurred because of our improved communications and our jet age era.

For many years "separation procedures," as used in the telephone industry, were not too much the concern of the Independent segment. Because of the nature of the telephone business in these United States, such procedures are complicated — as changes take place in our country, changes take place in the procedures. We are now finding that they are vital to our existence.

So often we hear the anguished cry that our people are becoming a people of "conformism." There seems to be a current similar cry in the area of separations and settlements between the two segments of our indus-

try. There is a rigidity when should be a flexibility. Situations in time and place. Just because one time and one place one arrangement could be deemed to be fair and equitable, this is no reason why another time or at another place same consideration should apply. I doubt that the problems of any exchanges are identical, let alone two companies. Is it possible separations procedures treat company identically when they should be treated *equitably*? This, to me, is one of the greatest problems facing our industry today — true, we have made some progress, but much is needed if our industry is to retain any semblance of the private enterprise all of us should seek to maintain.

The Winter Park Telephone Company

Winter Park, Florida

J. K. GALLOWAY, President

IN the face of the present critical international situation, our most important consideration today is the effect that the international crisis, war or limited war, would have on our operations.

In making this determination we are proceeding with an appraisal of those who may be called to active duty by the armed forces; others whose services may be required to a limited extent by the military or Civil Defense and how we would make replacements and continue a reliable service to the public.

In fact, we have appraised the need for line load control and have determined it necessary to have such service available in the event of an emergency. Such will limit traffic to emergency calls only and insure that those emergency calls are completed.

In making this appraisal we find it desirable to bring up to date our emergency restoration plan and to review and develop a plan for survival in the instance of a nuclear explosion in our area. This appraisal is taking into account the available facilities for bomb shelters and survival plans for employees and their families as well as others that we may be able to accommodate through the efficient use of our facilities. Although it is recognized that these appraisals may be unnecessary, in the light of existing international conditions, we think it prudent that business management make certain determinations that will assist in developing plans for service

to our customers in almost any eventuality. The above is being accomplished within the framework of our safety, personnel, plant and engineering department programs.

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Telephone Takes Place of Waiter in Restaurant

You'll be able to talk directly to the cook when you order your food in a restaurant.

J. Myerson of Washington, D.C., demonstrated his new Dine-A-Waiter system at the National Restaurant Association's convention.

You'll sit down at a table, pick up the telephone and dial the kitchen. You don't even see the waiter until your food is served.

Myerson expects to install a number of the new phones throughout the nation shortly. He says it will be a restaurant to serve twice as many customers with a third less help.

Telephone Industry Film to Be Shown at USITA Convention

Unveiling and premiere showing of the independent telephone industry's new documentary motion picture was slated to be the crowning event of the 64th annual convention of the United States Independent Telephone Association at the Conrad Hilton Hotel, Chicago, Illinois, October 9-11. In fact, the showing of the film, which has been produced during the past year under the supervision of the Association's Advertising Committee, was expected to be the grand finale of the three-day meeting of the men and women of independent telephony.

This 16 mm documentary film is in color and is aptly titled "The Independent." Members of the Advertising Committee who recently saw a preview of "The Independent" were unanimous in giving it their enthusiastic approval, branding it an excellent publicity and public relations device designed to supplement a national magazine advertising program for the state and local level.

At the completion of the firm's showing in Chicago, Chairman Hugh A. Barnhart of the Advertising Committee plans to explain how reprints of the motion picture are distributed for showing by USITA member companies in their areas.

It is hoped that those interested in obtaining the film for future showings will make it a point to attend the convention and be present at the premiere showing.

General Electric Withdraws Satellite Bid

THE General Electric Company has withdrawn its bid to establish an operational communication satellite system. G-E is also disbanding its subsidiary set up for this purpose, Communication Satellites, Inc.

G-E's action was made known recently when Newton Minow, chairman of the Federal Communications Commission answered a letter from G-E requesting withdrawal of applications before the FCC to certify and to license Communications Satellites, Inc. as a common carrier.

G-E says it arrived at a decision "not to divert its resources into the carrier communication field but to concentrate on its traditional rôle as a manufacturer of space vehicles and allied equipment."

In an earlier FCC action, G-E was refused a rôle on an ad hoc committee established by the FCC to evolve a plan for the ownership and operation of a communications satellite system. The FCC has not yet arrived at a decision as to who will be a participant in such a joint venture.

The ad hoc committee of international common carriers, is due to report its plan for a joint communication satellite system venture on October 13.

Electronic Mail Plan Abandoned

THE United States Post Office has given up experimenting with high-speed electronic transmission of mail after spending \$4.5 million on a test program, Postmaster General J. Edward Day said recently.

Mr. Day said the program was dropped because it was "a major departure from traditional methods of handling mail and threatened competition with private enterprise."

He spoke at a meeting of the American Bar Association section on corporation, banking and business law.

The test program called for transmission of "facsimile mail" by coaxial cable or microwave radio. A pilot operation capable of moving mail between Chicago and Washington in 15 seconds was announced last fall.

Mr. Day said several messages were sent but the program was dropped shortly after he came into office with the Kennedy Administration.

He said the system's cost was prohibitive and several private firms were experimenting with the same kind of project. They seemed likely to do a better job, he said, so the Government abandoned the program rather than be in direct competition with them.

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The Completed Rate Base—Overheads, Land, Depreciation, Working Capital
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THIS companion volume deals with those procedural matters which come after the preparatory stages of the rate case. It presents for the first time the practical problems of conducting the case —

- ▶ filing the application
- ▶ introducing the evidence
- ▶ examining the witnesses, etc.

In fact, it explains the time-saving and effective ways of making the step-by-step progress toward the rate decision, including information concerning the requirements for appeal and review.

Here are the *chapter headings*:

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Examination In Chief
Cross-Examination and Rebuttal
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The Case for Complainants or Rate
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Loans to 12 Companies 9 States Total \$4,949,000

Loans to 12 telephone companies in 9 states totaling \$4,949,000 were authorized.

The companies and the amount of loans to each follow: Trenton Telephone Company, Trenton, Georgia—\$238,000; Lime Springs Telephone Company, Riceville, Iowa—\$100,000; Leno County Telephone Cooperative Corporation, Jamesburg, Kentucky—\$927,000; Consolidated Telephone Company, Florence, Kentucky—\$1,292,000; North Star Telephone Company, Mountain Lake, Minnesota—\$310,000; Spring Grove Telephone Cooperative Company, Spring Grove, Minnesota—\$100,000; Felton Telephone Exchange, Inc., Felton, Minnesota—\$100,000; The Inter-County Telephone Company, Gallatin, Missouri—\$100,000; Decatur Telephone Company, Decatur, Mississippi—\$281,000; The Ritchie Telephone Company, Harrisville, West Virginia—\$100,000; Boscobel Telephone Company, Tomah, Wisconsin—\$379,000; Telephone Co-operative, Duane, Wisconsin—\$82,000.

C&P Plans \$3.7 Million Improvement Program

Over \$3.7 million was appropriated for plant additions and improvements in the District of Columbia by the Board of Directors of The Chesapeake and Potomac Telephone Company at its regular monthly meeting recently.

Arthur P. Clow, vice president in charge of the Washington Company, said that this appropriation will be used to provide approximately 4 miles of additional outside cable in the areas of Heights and Georgetown.

Independent Telephones to Total 12,000,000 by December 31

The United States Independent Telephone Association's statistical department estimates that there were 11,500,000 independent telephones in operation in the 50 United States and the District of Columbia as of October 1, 1961.

Independent telephones	11,915,000	12,075,000
Number of Operating Companies	3,190	3,050
Number of Exchanges	10,697	10,695
Investment in Telephone Plant	\$4,400,000,000	\$4,460,000,000
Operating Revenue (9 months)	\$1,100,000,000	
Operating Revenue (12 months)	\$1,125,000,000	\$1,130,000,000
Number of Employees	100,175	100,200

Bell Telephone Laboratories Grows with Bell System

IN an address at the 50th Anniversary Convention of the Telephone Pioneers of America, Boston, September 20th, J. B. Fisk, President of the Bell Telephone Laboratories, Inc., reviewed the Laboratories growth.

In 1925, when the Bell Telephone Laboratories was first organized as a separate corporation, at 463 West street in New York city, some 3,500 people were directly involved there in Bell System Research and Development work. Now there are more than 12,000—professional scientists and engineers alone being somewhat more than the original 3,500. About two-thirds of the people are on Bell system work, one-third on military. Laboratories personnel doing Bell System Research and Development work today have more than doubled but are very nearly the same fraction of the total of all Bell system employees that they were thirty-five years ago.

Last year the costs of Bell System Research and Development work passed \$100,000,000 for the first time and were nearly nine times the 1925 costs. The increase is nearly proportional to the increase in Bell system gross revenues which rose by more than ten times. In the same interval, while telephones have increased five-fold, the number of interconnections which must be provided by the switching and transmission network have increased 25-fold—one measure of the size and increased complexity of the communications job.

Facilities and laboratories are spread to 18 locations in 10 states with outposts at opposite points on the earth—Ascention Island in the South Atlantic and Kwajalein in the Pacific.

Dial TWX Memo Available

A MEMORANDUM on "DIAL TWX Service Order Procedures" has been made available by the Engineering Subcommittee on Technical Liaison with AT&T. It discusses the conversion schedule and pre-cutover inventory lists as well as service order procedures and use of the form TAW 232.

Copies of this memorandum may be obtained from Thomas R. Warner, USITA radio engineer, 438 Pennsylvania Bldg., Washington 4, D. C.

Mark R. Sullivan Elected President of Dialphone Corp.

MARK R. SULLIVAN has been elected president and director of the Dialphone Corporation, according to an announcement by Louis Perini, Sr., chairman of the board. He succeeds James Kilburg who resigned recently to open his own engineering and research firm. Mr. Kilburg will be available to Dialphone as a consultant.

Mr. Sullivan was formerly president of the Pacific Telephone and Telegraph Company, retiring from that position early last year.

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MARTINSVILLE, VIRGINIA

GT&E Annual Report Judged Best in Communications Industry

THE 1960 annual report of General Telephone & Electronics has been judged the best in the communications industry, according to *Financial World*, national weekly business-financial magazine.

Annual reports of approximately 5,000 publicly-owned corporations were entered in nearly 100 categories for the 21st annual competition, and were reviewed by an independent board of judges composed of leaders in education, finance, journalism, and the graphic arts.

Communications companies, including GT&E and five telephone operating companies in the General System, received certificates of merit.

The GT&E annual report was selected as the best of all of those which received certificates of merit. A bronze trophy will be presented at the annual awards ceremonies in New York on October 30.

Last year, Bell Telephone of Canada received the bronze trophy, followed by New York Telephone Company, and GT&E, the latter two organizations receiving certificates of merit.

Brochure Describes Daystrom Telemetrol® System

A SOLID-STATE Telemetrol system, which can connect up to 32 satellite stations to a central facility via two-wire party line, or, with additional party lines that can connect as many satellite stations as desired, is described in a new brochure being offered by Daystrom.

The Telemetrol system, developed by Daystrom Control Systems Division, La Jolla, thus provide accurate, on-line data collection and supervisory control for widespread telemetering and telecontrol operations. System functions include continuous scanning of multiple groups of input points per satellite; rapid operator alert of off-normal conditions at satellite stations before danger point is reached; supervisory control of remote functions; double transmission for error-free messages; verify-before-execute for proper control action; permanent records of scan cycles.

Free brochure describing the Daystrom Telemetrol system may be obtained from Daystrom, Incorporated, Control Systems Division, 4455 Miramar road, La Jolla, California.

RCA Receives Contract 3,060-Mile Network of Telecommunications Linking Turkey, Iran and Pakistan

AWARD by the International operation Administration (ICA) a \$16,400,000 contract to the Corporation of America for a 3,060-mile telecommunications network linking Turkey, Iran and Pakistan announced officially recently.

Signing of the contract took place at a ceremony attended by representatives of ICA, the Department of State, host countries and RCA.

Described as an important project of the U. S. Mutual Security program, the network will extend from Ankara, Turkey, as the western terminus, to Teheran, and then to Karachi, thus connecting the host country capitals. When completed by RCA in the next 18 months, the network will be taken over by the ICA to the host countries.

The system will be known officially as the CENTO Telecommunications Network, taking its name from the Central Treaty Organization, of which Turkey, Iran, Pakistan and the United Kingdom are members. U. S. has bilateral agreements with the host countries.

In signing the contract, Douglas C. Lynch, vice president and managing director, RCA International Division, pointed up the significance of the network declaring:

"The CENTO network will link Turkey, Iran and Pakistan and the advantages of a modern communications system, providing a mediacy of contact for diplomatic and commercial purposes.

"Such a system will aid materially in the commercial and industrial development of these countries. It considers it a great privilege to be able to play a part in this progressive international step."

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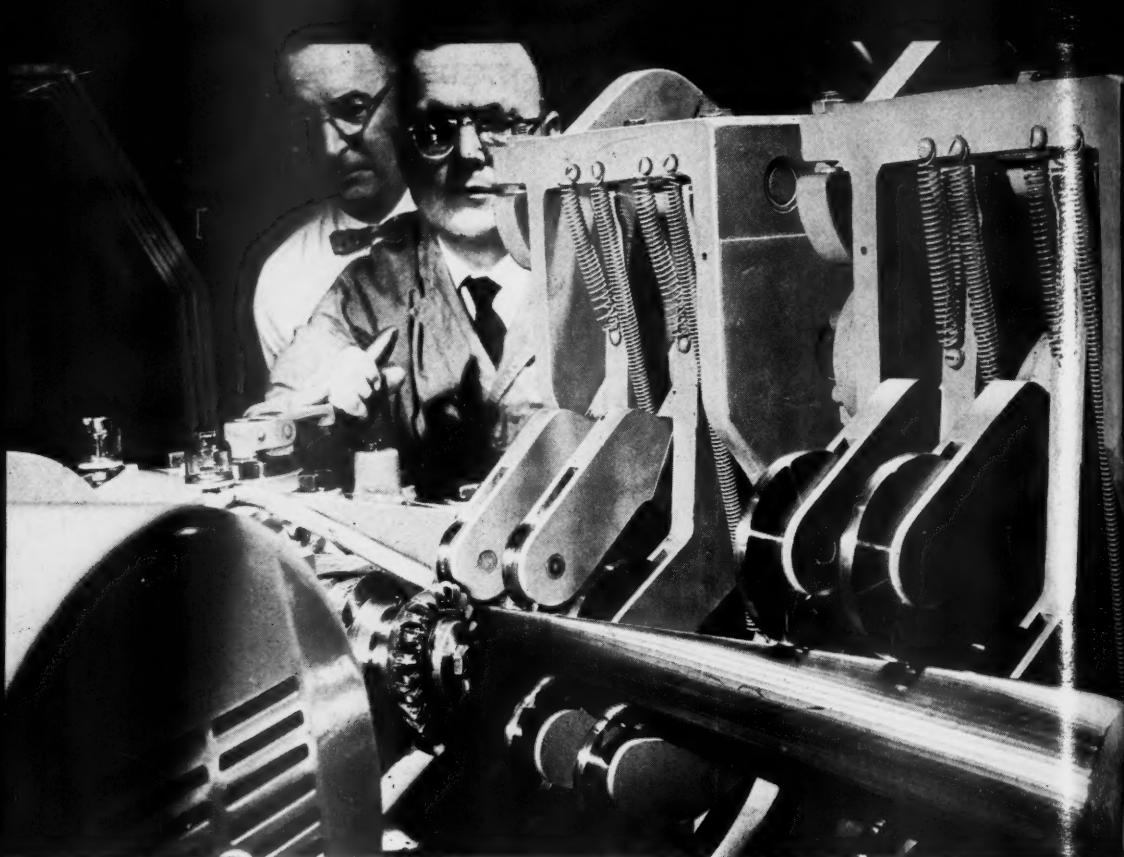
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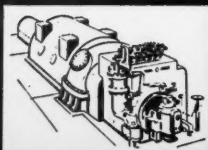
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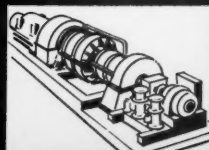
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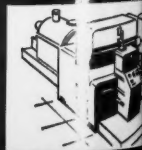
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